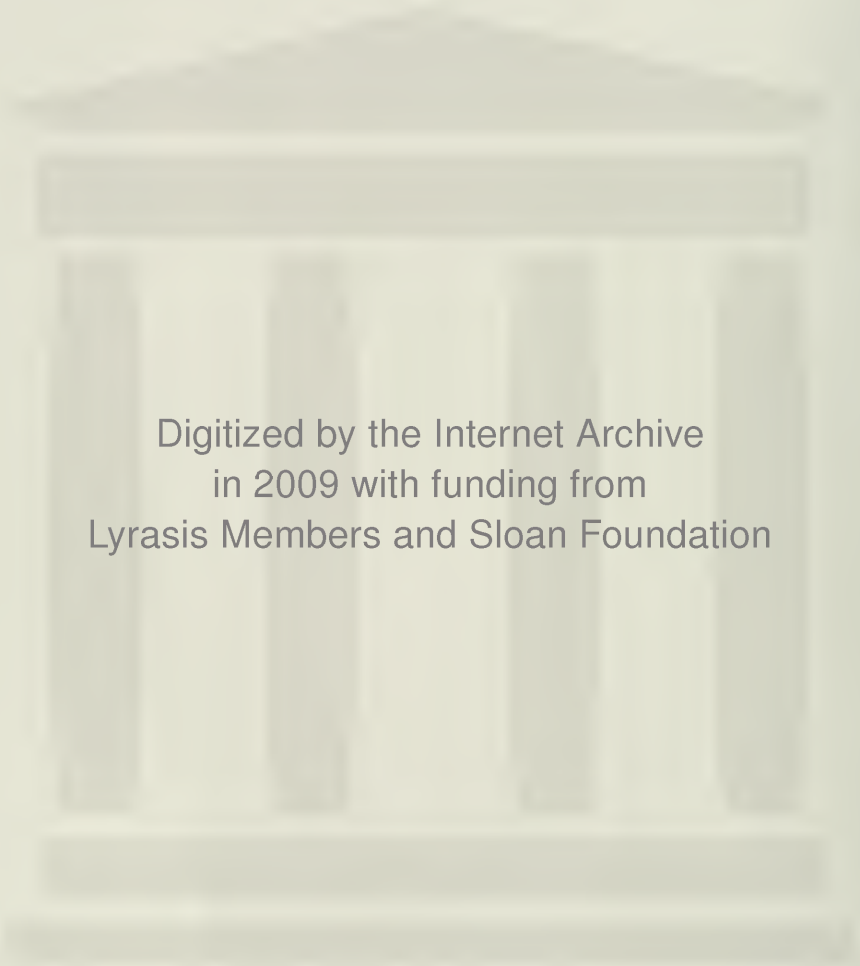
2001-02

Undergraduate Catalog

Indiana University of Pennsylvania



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2001-02

Undergraduate Catalog

Indiana University of Pennsylvania

Indiana University of Pennsylvania is committed to equal opportunity and affirmative action for its students, employees and applicants. The University is committed to providing equal educational and employment rights to all persons without regard to race, color, sex, religion, national origin, age, disability, ancestry, or sexual orientation. Each member of the university community has a right to study and work in an environment free from any form of racial, ethnic, and sexual discrimination. In accordance with federal and state laws, the university will not tolerate racial or ethnic discrimination or discrimination on the basis of disability.

This policy is placed in this document in accordance with state and federal laws including Titles VI and VII of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the Civil Rights Act of 1991 as well as all applicable federal and state executive orders. This policy extends to disabled veterans and veterans of the Vietnam era.

Please direct all general inquiries regarding equal opportunity and affirmative action to

Associate Vice President for Human Resources
Administrative Annex, 910 Grant St., Indiana, PA 15705
Telephone: 724-357-2431
Fax: 724-357-2685

TD: Telecommunications Device available in the
Advising and Testing Center, 724-357-4067 (V/TD)
(8:00-4:30, M-F)
Campus Police, 724-357-2141(TD) (24 hours)

IUP ensures compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act through the provision of program access accommodations. Please direct inquiries regarding accommodations for persons with disabilities to

Student Concerns:
Director, Advising and Testing Center/
Disability Support Services
504 Coordinator
106 Pratt Hall, 201 Pratt Drive, Indiana PA 15705
Telephone: 724-357-4067

Employee Concerns:
Assistant to the President for Social Equity/
Senior Human Resources Manager
Administrative Annex, 910 Grant St., Indiana, PA 15705
Telephone: 724-357-2431

Specific inquiries regarding Title IX should be directed to
Office of the Vice President for Student Affairs
212 Sutton Hall, 1011 South Dr., Indiana, PA 15705
Telephone: 724-357-1242

The university publishes an on-line student handbook, *The Source*, which is a companion to this catalog. The handbook contains detailed information on the policies mentioned on this page. *The Source* is accessible to all enrolled students at the website *http://www.iup.edu/stuaff/source.*

Questions regarding the Sexual Harassment Policy or complaint procedures may be directed to the Associate to the President for Social Equity/Senior Human Resources Manager, Administrative Annex, IUP. Policy approved by University Senate, May 1, 1990.

This bulletin contains announcements of courses for the academic year 2001-02. IUP reserves the right to repeal, change, or amend the rules, regulations, courses, and programs contained in this bulletin at any time. Tuition and fees are also subject to change.

IUP is the largest member university of Pennsylvania's State System of Higher Education and the only one to grant doctoral degrees. For information about the System and its other member universities, visit www.sshechan.edu

Indiana University of Pennsylvania

Online version: *http://www.iup.edu/registrar/catalog*

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IUP, Indiana, Pennsylvania 15705 *http://www.iup.edu*

University Calendar

Fall Semester, 2001

Registration	August 26
Classes begin	August 27
Labor Day (no classes)	September 3
Thanksgiving recess	November 18-25
Classes resume (8:00 a.m.)	November 26
Classes end	December 10
Final exams	December 11-18
December Commencement	December 16

Spring Semester, 2002

Registration	January 16
Classes begin	January 17
Spring vacation	March 3-10
Classes resume (8:00 a.m.)	March 11
Classes end	May 1
Final exams	May 2-9
May Commencement	May 11

Summer Sessions, 2002

To be announced

Board of Governors State System of Higher Education

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F. Eugene Dixon, Jr., Chairman Emeritus, Lafayette Hill
Kim E. Lyttle, Vice Chairman, Pittsburgh
R. Benjamin Wiley, Vice Chairman, Erie
Syed R. Ali-Zaidi, Shippenville
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James V. Manser, IV, Harleysville
Patricia K. Poprik, Doylestown
James J. Rhoades, Mahanoy City
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B. Michael Schaul, Mechanicsburg
Jere W. Schuler, Lampeter
John K. Thornburgh, Pittsburgh
Christine Jack Toretti, Indiana
Amy M. Yozviak, Nanticoke
Charles B. Zogby, Harrisburg

Chancellor State System of Higher Education

Judy G. Hample

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Samuel H. Smith, Punxsutawney
Gealy W. Wallwork, Kittanning
Judy G. Hample *(ex officio)*, Chancellor, State System of Higher Education

Executive Officers Indiana University of Pennsylvania

Lawrence K. Pettit, President
Ruth A. Riesenman, Executive Assistant to the President
Mark J. Staszkiewicz, Provost and Vice President for Academic Affairs
C. Edward Receski, Vice President for Administration and Finance
Joan M. Fisher, Vice President for Institutional Advancement
Harold D. Goldsmith, Vice President for Student Affairs and Interim Executive Assistant to the President for Planning and Analysis

President's Message

Congratulations on your decision to experience the exciting intellectual, cultural, and social world of Indiana University of Pennsylvania.

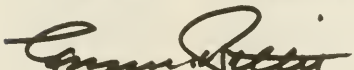
The only university in the Pennsylvania State System of Higher Education to confer doctoral degrees, IUP attracts faculty members who are on the cutting edge of their fields but are committed to undergraduate teaching. Outstanding programs in more than a hundred majors, from the traditional liberal arts and sciences to such professional fields as nursing, business, criminology, and safety sciences, offer a broad array of academic challenges. Classrooms and residence halls equipped with fiberoptics and cable television support a rich academic tradition in which students actively participate in the learning process.

IUP stretches the boundaries of the academic environment to include learning experiences, through research and internships, that prepare students for careers in the global marketplace. The university's internship program places students in a variety of professional settings, from the European Parliament to Fortune *500 companies to the White House. IUP's rigorous Liberal Studies requirement, emphasizing communication skills and analytical thinking, ensures that all our students are prepared for life as well as for a career. Longstanding excellence in the fine arts creates a campus life rich in cultural and entertainment opportunities. IUP's global partnerships bring a cosmopolitan student body to Indiana and provide attractive opportunities to study abroad.*

The Robert E. Cook Honors College at IUP is an exciting model that combines for especially gifted students intellectual engagement and service, reflecting the university's values of high intellectual achievement, personal development, commitment, and volunteer service.

Strong academic programs are complemented by the university's successful athletics program. Fans from across the region enjoy not only highly competitive teams but one of the country's top marching bands.

On behalf of the IUP family, I take pleasure in welcoming you.



Lawrence K. Pettit, President

Undergraduate Degrees Offered at IUP

Bachelor of Arts
- Anthropology (Tracks available: Applied Anthropology, Archaeology, General Anthropology)
- Art/History Track
- Art/Studio
- Biology
- Chemistry
- Computer Science
- Criminology
- Criminology/Pre-Law Track
- Economics
- Economics/Mathematics
- Economics/Pre-Law Track
- English
- English/Pre-Law Track
- French
- French for International Trade
- Geography (Tracks available: Economic Geographer, Environmental Geographer, General Geography, GIS and Cartographer)
- German
- German for International Trade
- Government and Public Service
- History
- History/Pre-Law Track
- Interdisciplinary Fine Arts
- International Studies/Political Science
- Journalism
- Music (Tracks available: History and Literature, Music Performance, Theory and Composition)
- Philosophy
- Philosophy/Pre-Law Track
- Physics
- Political Science
- Political Science/Pre-Law Track
- Psychology (Applied Psychology Track available)
- Regional Planning (Tracks available: Economic Developer, Environmental Planner, GIS and Cartographer, Town Manager)
- Religious Studies
- Sociology (Tracks available: Applied Social Research, General Sociology, Human Services)
- Spanish
- Spanish for International Trade
- Theater

Bachelor of Science in Education
- Art Education
- Biology Education
- Business Education
- Chemistry Education
- Early Childhood Education
- Earth and Space Science Education
- Education of Exceptional Persons
- Education of Persons with Hearing Loss
- Elementary Education
- English Education
- Family and Consumer Sciences Education
- French Education K-12
- General Science Education
- Secondary German Education
- Health and Physical Education
- Mathematics Education
- Music Education
- Physics Education
- Social Science Education (Concentrations available: Anthropology, Sociology; Tracks available: Economics, Geography, History)
- Secondary Spanish Education
- Speech-Language Pathology and Audiology
- Vocational-Technical Education

Bachelor of Science
- Accounting
- Applied Mathematics
- Applied Physics/Electro-Optics Track
- Biochemistry
- Biology
- Business/Pre-Law Track
- Business Technology Support
- Chemistry
- Child Development/Family Relations
- Communications Media
- Computer Science (Tracks available: Applied Computer Science, Languages and Systems)
- Consumer Affairs (Community Services Track available)
- Dietetics (Tracks available: Dietetics, Nutrition)
- Environmental Geoscience
- Environmental Health
- Fashion Merchandising
- Finance
- Food and Nutrition Science
- General Studies
- Geology
- Hotel, Restaurant, and Institutional Management
- Human Resources Management
- Interior Design/Housing
- International Business
- Management
- Management Information Systems
- Marketing
- Mathematics
- Medical Technology
- Natural Science (Tracks available: Pre-Chiropractic, Pre-Dentistry, Pre-Engineering, Pre-Optometry, Pre-Physical Therapy, Pre-Podiatry)
- Nuclear Medicine Technology
- Nursing
- Nursing/Registered Nurse Track
- Physical Education and Sport
- Physics
- Rehabilitation
- Respiratory Care
- Safety Sciences

Bachelor of Fine Arts
- Music Performance
- Studio

Associate of Arts
- Business (Specializations available: Computer and Office Information Systems, Accounting)
- General Studies

Associate in Applied Science
- Electro-Optics

Associate in Science
- Electro-Optics

The University

A University Education

Through undergraduate and graduate programs, IUP serves students from across the nation and around the world by introducing them to and sustaining them in a culture of high aspiration and achievement so they may lead productive and meaningful lives. Singly and through collaboration within the State System of Higher Education, with other educational institutions, and with business, government, human services, and professional organizations, IUP contributes to the economic and cultural strength of the region, the commonwealth, and the nation through education, scholarship, and service.

As the university continually evolves to higher levels of excellence, IUP will be

- An institution of higher and continuing learning committed to the teacher-scholar model and the learning-centered environment and a university where master's and doctoral education is targeted to the education of competent practitioners, the production of practical knowledge, and the enrichment of undergraduate life.
- A learning-centered environment in which students enjoy traditional and nontraditional classroom experiences, engage in research and service activities with their faculty mentors, become lifelong learners equipped to adapt to the changing needs of their professional lives, and develop leadership skills for effective citizenship.
- An institution guided by its heritage, maintaining an environment of inquiry that combines a thorough examination of cultural traditions and intellectual roots with scientific and technological currency and the best of the liberal arts with superior career preparation.
- A learning community in touch with the main currents of politics, economics, and cultural life throughout the world; a community enriched by the presence of a significant number of international students and by opportunities for study abroad; and a community supported by technology that facilitates active participation in the creation and use of information and knowledge on a global scale.
- A center of lively intellectual discourse and affection for the arts.
- A community that is diverse in composition, with a clear commitment to tolerance, compassion, and service.

History of the University

IUP has witnessed a history rich in accomplishment. Since 1875, when it served only 225 students in a single building, it has experienced continuous growth, becoming Pennsylvania's fifth largest university. The current enrollment is over thirteen thousand, with students from thirty-six states and over fifty-five countries.

The first building, named John Sutton Hall in honor of the first president of the Board of Trustees, was opened for students on May 17, 1875.

In April, 1920, control and ownership of the school passed to the Commonwealth of Pennsylvania. In May, 1927, by authority of the General Assembly, the State Normal School became a college, with the right to grant degrees. The name was then changed to the State Teachers College at Indiana, Pennsylvania. In 1959, the legislature approved a change of name to Indiana State College; in the 1960s there followed a rapid growth in the liberal arts program. In December, 1965, Indiana was redesignated Indiana University of Pennsylvania and given the authority to expand its curriculum and to grant degrees at the master's level. At this time the first doctoral program was initiated.

Current academic offerings include more than a hundred undergraduate majors with a variety of internship and study abroad programs, more than forty master's degree programs, and eight doctoral degrees. Unusual opportunities for research at all levels and the Robert E. Cook Honors College provide special challenges for academic growth. The variety and quality of instruction are characteristic of a big university, yet at IUP, close, one-to-one-relationships develop within the teaching framework, and a strong sense of community prevails.

The following publications have all recognized IUP for its high academic standards and

competitive costs: *Arco's Dollarwise Guide to American Colleges*; *Barron's 300: Best Buys in College Education*; *The Best 331 Colleges*, published by *Princeton Review*; *The Best Buys in College Education* by Edward Fiske, education editor of the *New York Times*; *Changing Times*; *How to Get an Ivy League Education at a State University* by Martin Nemko; *Money* magazine's *Money Guide*; *Two Hundred Most Selective Colleges: The Definitive Guide to America's First-Choice Schools*; and *U.S. News and World Report*.

University Governance

Indiana University of Pennsylvania is one of fourteen members of the State System of Higher Education in Pennsylvania. Oversight of the System is vested in the Board of Governors, the members of which are appointed by the governor. Each university has its own Council of Trustees, responsible for financial oversight and insuring compliance of university policies with state law. Responsibility for the day-to-day operations is entrusted to the university president, who is the chief executive officer.

Due to the complexity of the university, the president relies on the University Senate to develop and approve curricula and to advise the president on setting policies that affect and shape the working and learning environment at IUP. The University Senate is composed of faculty, students, and administrators who are both elected and appointed by their peers.

Many of the important policies governing the working and learning environment, such as the policy on sexual harassment, the academic integrity policy, and the policy on nondiscrimination, are given in this catalog or the student handbook (*The Source)* and are also available on the World Wide Web at *http://www.iup.edu*. To insure a nurturing environment where all faculty, students, and administrators can work together in harmony, it is essential that all members of the university be familiar with these policies as they set the expectations for civil behavior and academic conduct.

Accreditation

IUP is a state-owned institution for higher education and a member of the State System of Higher Education. It is an approved and fully accredited member of the following:

- American Chemical Society
- American Culinary Federation Educational Institute
- American Psychological Association
- American Speech-Language-Hearing Association
- Association to Advance Collegiate Schools of Business (AACSB International)
- Commission on Collegiate Nursing Education
- Council on Hotel, Restaurant, and Institutional Education
- Joint Review Committee for Respiratory Therapy Education
- Joint Review Committee on Educational Programs on Nuclear Medicine Technology
- Middle States Association of Colleges and Schools
- National Accrediting Agency for Clinical Laboratory Sciences
- National Association of School Psychology

- National Association of Schools of Music
- National Association of Schools of Theater
- National Council for Accreditation of Teacher Education
- Related Accreditation Commission of the Accreditation Board for Engineering and Technology

Buildings and Grounds

In 1875, the main campus consisted of 12 acres and one building. With the addition in 1995 of 137 acres of undeveloped land from the former Campbell and County farms, the main campus now comprises 341 acres, on which are located seventy-five major buildings owned by the state and seven athletic fields. Two of the buildings, Breezedale and John Sutton Hall, have been entered in the National Register of Historic Places.

The Punxsutawney Branch Campus totals 5.98 acres consisting of two sites–four buildings at the Punxsutawney campus and the Culinary School. The Armstrong Branch Campus has four buildings and a total of 1.74 acres.

The Co-op Recreational Park, located a few miles from the campus, consists of 280 acres and several buildings, including a lodge and a ski hut. The wooded hillsides offer opportunities for nature study and for such outdoor recreational activities as driving golf balls, hiking, cross-country skiing, and exercise trails.

Indiana, the County and the Town

Indiana County was formed by act of the state legislature in 1803 and was fully organized in 1806. George Clymer of Philadelphia, a signer of the Declaration of Independence, owned more than three thousand acres in the area and presented 250 acres to the new county for a county seat. The town of Indiana was officially founded in 1816.

The county's first major industry was the manufacture of salt, which began in 1813 about two miles above the town of Saltsburg. As early as 1797 bituminous coal was dug from exposed outcroppings. Mining soon rivaled agriculture as the backbone of the county's economy. Its influence gradually diminished, though, and today IUP is the county's largest employer. Indiana County now thrives with an economic base combining education, agriculture, energy production, and commerce into an outstanding quality of life for its nearly 90,000 residents.

Indiana has become known as the birthplace of film star, Jimmy Stewart, and as the Christmas Tree Capital of the World. Visitors and locals alike can relive Indiana County's past by visiting one of its parks, covered bridges, fairs, and even the largest Amish settlement in Western Pennsylvania. As one of nine counties represented in America's Industrial Heritage Project, Indiana County has a number of historical sites that are part of the project's Path of Progress. The project's archives are housed in the Special Collections section of IUP's Stapleton Library.

Alumni

With a living alumni base that comprises more than eighty thousand individuals, the university has come to rely on the support of its alumni in a variety of areas. These include career networking, student recruitment, and government relations, as well as fund-raising and service on the Council of Trustees, Alumni Association Executive Board, and a number of advisory committees.

Graduates automatically become members of the Alumni Association. They are encouraged to continue their connections with IUP through periodicals like *IUP Magazine* and the university's World Wide Web sites.

Resources

Computing Services: All students have access to an extensive set of web-based services, including class registration, schedule planning, and records management. Students are also provided with an e-mail account and a network account, which afford personal disk space for e-mail, projects, and web pages. Technical support is available via the Student Computing Help Desk (see *http://www.iup.edu/ats/*).

Academic computing support is provided by technical staff assigned to each college. The college staffs provide computational support for undergraduate and graduate students and for faculty and student research.

Connectivity for student computers in the residence halls is provided through the Office of Housing and Residence Life. The administrative needs of the university, including the Library's information systems, are served by the Technology Services Center.

The university's computing infrastructure consists of an extensive Windows-based network, several Unix systems, and a Compaq OpenVMS cluster. Access to the network is provided from every campus building utilizing a fiberoptic backbone. Discounted dial-up access is available via an arrangement with a local

internet service provider. IUP is connected to the Internet via SSHEnet.

Student access to computing is provided, for the most part, through the public computing laboratories. The primary public labs are strategically placed around campus to maximize their availability and impact. Several departments maintain computing facilities that are of a focused nature and which are intended to support specific programs. These include several specialized networks to address particular needs.

Through implementation of its strategic computing plan, which is part of the university long-range planning process, the university is committed to providing the level of computing and information technology necessary for a modern institution of higher education. Guidance in this area is provided by both the Academic Computing Policy Advisory Committee and the Administrative Computing Oversight Committee.

Libraries: Patrick J. Stapleton, Jr., Library, the central library for IUP, was completed and dedicated in 1981. It adjoins Rhodes R. Stabley Library, which results in a combined structure of 156,000 square feet. The Cogswell Music Library, the University School Library, and the branch campus libraries in Kittanning and in Punxsutawney are the other components of the IUP library system. Eighteen library faculty members, twenty-two support staff members, and over two hundred students are employed in the Libraries division of the university.

The book collection contains 806,332 volumes; there are 3,437 periodical subscriptions, 1.8 million items of microforms, over 128,000 bound periodicals, and over 32,000 volumes of governmental publications. (IUP is a designated Select Depository for federal and state publications.) The libraries' media holdings in all formats are extensive. Resources are supplemented through membership in OCLC for interlibrary loan, the Health Sciences Consortium (North Carolina), the Laurel Highlands Consortium, and the Center for Research Libraries.

The central library is open 92 hours a week during regular terms. The Cogswell Music Library, located on the top floor of Cogswell Hall, contains approximately 10,000 books, 50,000 scores, 13,000 recordings, and 2,000 CDs. Holdings of monumental editions are substantial. Sound recordings circulate only to faculty members, but listening stations are available for use by all patrons.

The University School Library's 11,000 volumes support the curriculum of grades K-6 at the University School. The Armstrong County Campus library has more than 24,000 volumes, and the recently renovated Punxsutawney library contains more than 15,000 books as well as 86 periodical subscriptions and recordings of music, poetry, and drama. The IUP Libraries are active members of the State System's Keystone Library Network, and through the KLN, the university has a shared online catalog and receives many electronic databases. The Libraries are also charter members of the Pennsylvania Academic Library Consortium Initiative and receive direct loans from the state's major university and college libraries.

Institute for Research and Community Service: The Institute for Research and Community Service serves as the primary outreach office of the university to link community effort and need with the diverse resources of the university and to encourage research activities among the faculty. Major areas of responsibility include: 1) to expand economic development and public service initiatives within the university's research mission; 2) to provide a coordinating function for all IUP research centers; and 3) to provide leadership and support for the Applied Research Lab and other affiliate programs.

IUP Centers and Institutes: Centers and institutes serve a variety of functions. Each center/institute is unique in its focus and is created to meet a specifically identified need. Centers provide an opportunity for faculty members to utilize their expertise through consultation, technical assistance, and research-related activities. Centers/institutes provide excellent opportunities for students to learn, to demonstrate their knowledge and skills, and to become involved in meaningful projects in the community. Centers/institutes strengthen the research and public service missions of the university and, therefore, enhance the quality of education. A current listing of centers and institutes at IUP follows.

- American Language Institute
- Biotechnology Research Institute
- Business, Industry, and Labor Program
- Cardiac Rehabilitation Center
- Center for Applied Psychology
- Center for E-Commerce and Technology Support
- Center for Economic Education
- Center for Educational and Program Evaluation
- Center for Middle Eastern Studies
- Center for Research in Criminology
- Center for Research in Written Communication and Translation
- Center for Statistics Education in Pennsylvania at IUP
- Center for Teaching Excellence
- Center for Video Technology
- Center for Vocational Personnel Preparation
- Child Study Center
- Criminal Justice Training Center
- Highway Safety Center
- Institute for Research and Community Service
  - Applied Research Lab
  - Archaeological Services
  - Community Nutrition Services
  - Mid-Atlantic Addiction Training Institute (MAATI)
- Instructional Design Center
- Intercollegiate Athletic Institute for Sports Camps
- IUP Pine Grove Center
- Literacy Center
- Management Services Group
  - Center for Family Business
  - Government Contracting Assistance Program
  - Small Business Development Center
  - Small Business Incubator
  - Small Business Institute
- National Environmental Education and Training Center, Inc. (NEETC)
- Pennsylvania Center for the Study of Labor Relations
- Pennsylvania OSHA Consultation Program
- Software Development Center
- Spatial Sciences Research Center
- Speech and Hearing Clinic
- Teacher Education Center for Science, Mathematics, and Technology

University Organization

The university's administration comprises four divisions: Academic Affairs, Administration and Finance, Institutional Advancement, and Student Affairs. Information about Academic Affairs and Student Affairs appears in this catalog's sections called, respectively, Academic Affairs Division Areas and Student Programs and Services. Information about the other two divisions appears below.

Administration and Finance Division: The Division of Administration and Finance provides internal and external constituents of the university with the highest-quality services in the most supportive and cost-effective manner. In contributing toward the fulfillment of IUP's mission of teaching, research, and public service, the division is responsible for the development, stewardship, enhancement, integrity, and stability of the university's fiscal, human, and physical resources.

Major responsibilities of the division are organized and operated from the five distinct departments of Facilities Management, Fiscal Affairs, Human Resources, Campus Police/Public Safety, and Printing Center. The physical campus consists of 341 acres and seventy-five major buildings on the main campus in Indiana along with branch campuses located in Punxsutawney and Kittanning.

At the direction of President Lawrence K. Pettit in September of 1993, the division developed, directed, coordinated, and produced IUP's Long-Range Campus Development Plan. The plan, approved and published in February, 1996, permits versatile and flexible guidance for which the physical plant and facilities can be maintained and expanded in support of IUP's academic goals and aspirations for its future. The Long-Range Campus Development Plan continues to guide the university as it prepares effective and orderly financial plans for implementing the proposed changes in physical facilities.

Institutional Advancement Division: The advancement arm of the university, the Institutional Advancement Division brings together several functional areas. The publications and image, public relations, media relations, governmental relations, alumni affairs, and development areas stimulate positive regard for the university and acquire new resources. The departments feature the excellence and achievement of faculty, students, staff, and alumni and engage people in the life of the university. Staff members and volunteers raise private resources that can influence the quality of the academic environment and of student and alumni life.

The Foundation for IUP is the nonprofit charitable vehicle steered by a distinguished Board of Directors through which the charitable dollars raised by volunteers and staff members are passed to the university to improve the educational and learning environment.

The Branch Campuses

Patricia D. Scott,
Dean of the Armstrong Campus
Valarie J. Mancuso,
Dean of the Punxsutawney Campus

IUP operates two branch campuses, one in Punxsutawney, twenty-eight miles north of the Indiana campus, and one in Kittanning, twenty-eight miles west of the Indiana campus. The first branch campus was established in 1962 in Punxsutawney. The following year the Armstrong campus in Kittanning was opened. The Punxsutawney campus accommodates 200-225 students, and the Armstrong campus accommodates 300-350 students.

Control of the branch campuses is directly vested with the IUP administration and Council of Trustees. Both branch campuses carry full accreditation as integral parts of the undergraduate programs of IUP. This means that courses offered at the branch campuses are of the same quality as those offered at the Indiana campus.

Armstrong Campus

The Armstrong Campus is a nonresidential facility with the primary mission of meeting the workforce-related education needs of Armstrong County and surrounding areas in manufacturing technologies, computer-based training, and health-related disciplines. It is the workforce engine for the county and surrounding communities, providing citizens of Armstrong County with access to higher educational opportunities that foster economic, professional, and workforce development. Both credit and noncredit programs are offered at the Armstrong Campus, with special emphasis on associate degrees, graduate degrees, certificates, and liberal studies courses for the first-year experience for commuter students. Special degrees, such as the A.S. in Electro Optics and the A.A.S. in Electro Optics, are offered only at the Armstrong Campus. Graduate programs, such as the Masters in Education, can be completed entirely at the Armstrong Campus. Undergraduate prospective students who wish to attend the Armstrong Campus may apply for admission by requesting an application from the Admissions Office, while prospective graduate students who wish to attend the Armstrong Campus may apply for admission by requesting an application from the Graduate School and Research. In addition, requests for applications may be made to dean of the campus. The address follows:

Armstrong Campus
IUP
704 North McKean Street
Kittanning, PA 16201
http://www.iup.edu/armstrong

Programs of Study

The branch campuses of IUP offer basic Liberal Studies courses for most majors in the various undergraduate colleges of the university. Students may schedule a full program for the freshman year and some sophomore-level courses. No student accepted at either of the branch campuses is eligible for transfer to the Indiana campus until he/she has completed two semesters and has attained at least a 2.0 GPA and earned at least 21 undergraduate semester hours.

Faculty advisors and administrators at the branch campuses are available to advise students on their instructional programs and the proper time for continuing at the Indiana campus.

Admission

Any prospective student who wishes to attend either of the branch campuses instead of the Indiana campus may apply for admission by requesting an application from the Admissions Office or from the dean of either branch campus. The mailing addresses for the respective branch campuses follow:

Armstrong Campus (listed at left)

Punxsutawney Campus
IUP
1010 Winslow Street
Punxsutawney, PA 15767
http://www.iup.edu/punxsutawney

Fees

Branch campus students pay the same basic fees as Indiana campus students.

Food Service

The Punxsutawney campus has its own dining hall within the residence hall. Meals are served seven days a week during the time the university is in session. Residence hall students as well as students living in private homes and apartments may make arrangements to take meals in the dining halls. The dining service is operated by the same food service contractor as on the Indiana campus.

Housing

The Punxsutawney Campus has privately owned residence halls for students living beyond commuting distance. Students are free to choose their housing from all available sources, which include the residence halls and private homes or apartments in the community. A list of rooms and apartments is available in each campus director's office.

Rules and Regulations Concerning Student Behavior

Students at the branch campuses are subject to the same rules and regulations as students on the Indiana campus.

Continuing Education

The School of Continuing Education plays a significant role in programming Community-University Studies classes (noncredit), academic workshops, and institutes in the Punxsutawney and Kittanning areas. The school is also responsive to the needs of the local community through credit and noncredit activities.

Admissions and Registration

Undergraduate Admissions Policy

Graduates of an accredited four-year high school or holders of a GED equivalency diploma are qualified to apply for admission to IUP. Students who have completed the junior year of high school may file an application any time after July 1.

Requests for applications and catalogs should be addressed to

Office of Admissions
Indiana University of Pennsylvania
210 Pratt Drive, Suite 16
Indiana, PA 15705
1-800-442-6830 or 724-357-2230

The Admissions Committee, giving equal opportunity to all students, will take the following criteria into consideration when reviewing each application: SAT or ACT scores, class rank, grades, high school counselor recommendations, faculty recommendations, extracurricular activities, and other pertinent information that would be helpful to the Admissions Committee in making decisions. SAT or ACT scores are not required for transfers, veterans, or applicants who have graduated from high school more than five years before applying. However, high school and all previous college transcripts are required of all applicants.

Although the university does not require a specific number of high school credits in particular subject areas, applicants are strongly urged to take the usual college preparatory program in high school. Applicants should also take any available high school courses in the field of their intended major. Certain majors at IUP require completion of a foreign language at the intermediate level in order to earn a bachelor's degree. The Admissions Committee does not require an applicant to take a foreign language in high school for admission to these majors.

Applications are considered by the Admissions Committee on a rolling basis. Under a rolling admissions policy, applications are reviewed as they become complete. Decisions can range from automatic acceptance, to request for additional information, to other alternatives, with a May 1 deadline for tuition deposits.

Academically qualified applicants to the departments of Art, Music, and Theater will be admitted to the university by the Admissions Committee. However, admission to the requested major will be subject to the acceptance by the Department of Art after a portfolio review and by the departments of Music and Theater after an audition. Students will receive information from the Art, Music, and Theater departments concerning auditions and portfolio reviews once they have been accepted to IUP.

Freshman Applications

Applications for admission will be available after July 1 following the student's junior year of high school.

All persons expecting to apply for freshman admission to IUP should plan to take the SAT or ACT test during their junior and/or early part of their senior year. The Admissions Committee recommends that students take the tests more than once. The committee considers the highest scores from all tests taken.

Arrangements to take the SAT or ACT tests can be made through the high school principal or counselor, or by writing to the College Entrance Examination Board, Box 592, Princeton, NJ 08540 or American College Testing, P.O. Box 168, Iowa City, IA, 52243 for an information pamphlet and a test registration form.

In order for the test scores to be received by IUP, the applicant should designate IUP on the test registration form as one of the universities to receive the scores, or the applicant can request that his or her school counselor forward test scores to the Admissions Office.

The applicant should give the completed application form and the nonrefundable $30 application fee payable to IUP to his/her high school counselor or principal. The counselor or principal should mail the application and complete packet of admissions materials to the IUP Office of Admissions, 210 Pratt Drive, Suite 16, Indiana, PA 15705.

Early Admission

The Early Admissions Program permits students to enroll as college freshmen after completing the junior year in high school. Early admission applications must originate with the student's high school counselor and principal. Admission consideration will be given to those applications which contain a statement indicating explicit approval by the high school principal. Applicants are considered on an individual basis. The university Admissions Committee will exercise

the final judgment as to university acceptance after a personal interview with the applicant. Early admission candidates are required to arrange for two separate interviews with Admissions counselors as part of the application procedure.

Processing the Application

1) The Admissions Committee reviews, with care and understanding, each of the several thousand applications that are submitted each year.
2) Decisions on applications are made on a rolling basis.
3) Applicants who are admitted to IUP may be invited to attend a program on campus to receive general information and discuss their academic and career plans with the college dean, faculty representative of their respective major, or other advisors.
4) A $75 nonrefundable tuition deposit is due from all incoming students. This advance deposit payment will be credited toward the applicant's tuition.

Transfer Admissions

A student who has been attending another institution of higher education and wishes to transfer to IUP must submit an application with the $30 application fee, official transcripts of all postsecondary educational work, and an official high school transcript.

All admissions decisions are made on a rolling basis by the Admissions Committee. Under a rolling admissions policy, applications are reviewed as they become complete. Decisions can range from automatic acceptance, to request for additional information, to other alternatives.

Transfer applications (twelve or more postsecondary, college credits attempted) are reviewed on the basis of college coursework completed. Transfers are required to have at least a cumulative 2.0 GPA on a 4.0 scale (C average) from all schools previously attended for admission to most programs. The teacher certification program requires a minimum 2.5 cumulative GPA from all schools previously attended.

The evaluation of credits from other institutions of higher education is the responsibility of the Office of Admissions and the academic college dean who has jurisdiction over the student's desired major. Normally, courses considered for transfer are only those taken from institutions which are accredited by the six regional accrediting agencies. Each course is evaluated separately. The evaluation includes a review of the description, semester hours, and grade of each course along with the applicability of the course to the student's major at IUP. However, only credits transfer, not grade-point average. It has been the policy of the university that only courses with a "C" or higher grade will be accepted, except for two-year associate degree graduates of state-supported community colleges in Pennsylvania. No matter how many credits are transferable, the student must satisfy all of the degree requirements falling into the categories of (1) university requirements, (2) college requirements, and (3) department requirements.

University requirements: Since all students are obliged to fulfill a basic program in Liberal Studies consisting of 53-58 semester credit hours and there is a reasonable degree of flexibility in the Liberal Studies requirements, the transfer evaluator and the college deans will look to this area first for applicable credits for transfer. Most introductory courses are generally equivalent.

Transferring to the College of Education and Educational Technology

Students who transfer from other colleges and universities to IUP and the College of Education and Educational Technology must complete application for Step 1 of the 3-Step Process. Admission to Teacher Certification Program. The appropriate forms will be sent to students by the College of Education and Educational Technology after they have been accepted.

Only students who have completed Step 1 of the 3-Step Process are eligible to take Core Education coursework. In some programs, students must meet these requirements to take professional courses as well. Students should consult with the department chairperson and/or program coordinator for their specific program.

Students who do not meet the cumulative GPA of 2.6 are not eligible for admission to the College of Education and Educational Technology. Students should reapply for admission when deficiencies have been met.

Students should direct questions to the department chairperson and/or program coordinator for the selected major.

Residency Requirements for Awarding of Degrees

The university requires that at least 45 semester hours, generally including the last 30 semester hours in a student's curriculum, must be earned by enrollment in courses at IUP; 15 of these semester hours must be in the student's major. It should also be noted that for community college graduates a maximum of 60 credit hours are transferable to this institution for the purpose of fulfilling a specific program of study. Excess semester hours, if any, may be transferred but cannot be used for fulfilling the minimum requirements for the degree.

To remain in good academic standing, transfer students must meet the same GPA requirements as those specified for all other undergraduate students. See section entitled "Criteria Governing Continuance at IUP."

The university accepts semester hours associated with "D" grades only when they are part of a completed associate degree earned at a publicly owned community college in Pennsylvania. These "D" grades will be treated in the same manner as those earned at IUP. This articulation policy was adopted by the Board of State College and University Directors in 1973.

Part-Time Study (Nondegree)

Part-time undergraduate study is available through the School of Continuing Education to any high school graduate or holder of a GED Equivalency Diploma. No SAT scores are required. Note: A TOEFL Score is required as part of the application for an individual whose native language is other than English. Those who are not U.S. citizens must submit a notarized copy of their current visa and I-94 card or alien resident card.

Applications are available from the Part-time Studies Program and must be submitted with documentation directly to the School of Continuing Education by August 15 for the fall semester and December 15 for the spring semester. A $30 application fee is required. Applications submitted after established dates are not guaranteed consideration.

Transfer students may also apply to the School of Continuing Education for part-time study and must submit official transcripts for all previous college work attempted. An overall 2.0 GPA is required.

A student in the Part-time Studies Program is limited to a semester enrollment of no more than 11 semester hours and must apply for formal admission to a degree program before 30 IUP semester hours have been earned. Applications for degree candidacy must be filed by the midterm point of the fall or spring semester preceding candidacy. Specific requirements for GPA and IUP credit vary by degree program. The minimum credit criteria to apply for consideration for degree candidacy are as follows:

High School Diploma or GED
15 IUP semester hours 2.0 GPA
Veteran (DD-214 required)
9 IUP semester hours 2.0 GPA
Transfer (with 12 or more semester hours)
9 IUP semester hours 2.0 GPA
Transfer (with 11 or less semester hours)
15 IUP semester hours 2.0 GPA

Note: A student who has applied and has been admitted by the Office of Admissions to a branch campus is not eligible to apply to the School of Continuing Education.

Program for Visiting High School Students

IUP permits the exceptional high school student to preview university life and earn regular college credit on a limited nondegree basis. The student must have completed the sophomore year with a minimum of a "B" average and have the written support of the high school principal or guidance counselor. The parameters of the student's enrollment are defined in consultation with the appropriate high school official and are limited to a maximum of 9 semester hours per semester. For further information, contact the School of Continuing Education.

Post-Baccalaureate Studies (Undergraduate)

The Post-Baccalaureate Studies Program provides access to undergraduate courses to individuals who have an earned baccalaureate degree. Students may be seeking a second bachelor's degree, an additional teacher certification, or personal enrichment. Students may enroll on a full- or part-time basis based on personal preference and availability of coursework.

Applications are available from the School of Continuing Education. A completed application and official transcripts of all previous undergraduate coursework must be submitted for review by August 15 for fall semester and December 15 for spring semester. Applications not submitted by established dates are not guaranteed consideration. A $30 application fee is required. The fee is waived for graduates of IUP.

Second Baccalaureate Degree

A student with an earned baccalaureate degree who wishes to complete the requirements for a second or subsequent bachelor's degree must make application and submit official transcripts indicating degree(s) awarded. The student must complete a minimum of thirty additional IUP credits beyond those earned in his/her initial bachelor's degree and meet the requirements for graduation established by the academic department and college in which the new degree is to be earned. It is not possible to receive two or more baccalaureate degrees simultaneously. However, a student may complete one or more secondary majors while earning the primary degree.

Teacher Certification

A student with an earned nonteaching baccalaureate degree who wishes to complete the requirements for Instructional Level I certification must apply as a second bachelor's degree student. A minimum cumulative GPA of 2.6 is required for consideration for admission. To earn Instructional Level I, the student must satisfactorily complete the prescribed courses in an IUP degree certification program at a minimum cumulative GPA of 2.6 and successfully pass the National Teacher Examination.

A currently Pennsylvania-certified teacher who wishes to add a new area of certification may apply to the School of Continuing Education under the category teacher certification. Individuals admitted to an additional teacher certification will follow an individually planned and approved course of study.

Immunization Requirements

Students are required to complete a Student Health Form documenting immunization status. See Health Services information in section "Student Programs and Services."

Readmission Policy for Students Who Withdraw from the University Voluntarily

Graduate students wishing to return to the university must contact the Graduate School at 724-357-2222 for specific instructions. School of Continuing Education students should contact the School of Continuing Education at 724-357-2292.

All other undergraduate students who have withdrawn from the university, or were not enrolled during the previous regular semester, must complete an Application for Readmission available in the Office of the Registrar, Clark Hall, or by calling 724-357-2377. During evening or weekend hours, you may call this same number and leave your name and address and a form will be promptly mailed to you. The readmission deadline for the Spring semester is December 1, and for the Fall semester is July 20.

All outstanding financial obligations to the university must be met before your Application for Readmission will be processed. Due to enrollment restrictions, requests for readmission to Nursing or the College of Fine Arts will be forwarded for approval by a representative from that department or college.

Requests for readmission for academically dismissed students will be forwarded to the Office of the Dean of the college in which the student was enrolled at the time of dismissal for a decision on the student's readmission.

Readmitted students who have not been enrolled for two years or more may petition their college dean for application of the Canceled Semester Policy. Students who have not been enrolled for more than five years may petition their college dean to return under the Fresh Start Policy. Students must pay fees and attend classes before a designated semester will be canceled or the fresh start policy will take effect.

Once your application for readmission has been approved, you will be sent instructions on how and when to register.

As a student readmitted to IUP, you are encouraged to complete the Free Application for Federal Student Aid (FAFSA) to determine your financial aid eligibility. Your financial aid eligibility will be based on your financial need, as determined by the FAFSA, and your prior academic record.

If you have previously attended a postsecondary school or schools other than IUP, a Financial Aid Transcript must be completed by this previous school and sent to the IUP Financial Aid Office.

The Summer Sessions

The summer school program at IUP is designed to meet the needs of many students. Courses, workshops, and seminars are offered in the liberal arts, teacher education, and other fields of study.

Continuing university students, including newly admitted freshmen, who wish to accelerate their program of studies will find both Liberal Studies and special courses in all fields of study. Students from other colleges and universities may take courses at IUP; however, they are advised to first ensure that their home institution will transfer such credits earned at IUP.

Teachers-in-service will find courses in the summer program to serve a variety of needs. They may enroll to qualify for permanent certification, take refresher courses in their field of specialization, or take courses for the purpose of extending their certification to a new field.

The Summer Sessions Schedule can be viewed on the World Wide Web at *http://www.iup.edu/summer*. Contact the Scheduling Center, Clark Hall (toll-free number 888-800-3190) for more information.

Attendance at summer sessions undergraduate school is open to all students but does not constitute admission or readmission for continuing registration in the fall and/or spring semesters. IUP students with less than a 2.0 cumulative GPA must receive approval from their dean's office before attending summer courses. Non-IUP students who desire admission must obtain an application through the Office of Admissions or the School of Continuing Education, as appropriate. Students who desire readmission for the fall semester must apply to the Registrar's Office by the preceding July 20 and by December 1 for the spring semester.

English Language Programs for International Students and Visitors

The American Language Institute (ALI) offers several noncredit, intensive English programs for international students and visitors from beginning through advanced levels each semester.

The English for Academic Purposes Program (EAP) is for applicants seeking to prepare themselves for study at any U.S. college or university. Enrollment in fall and spring semester is for fourteen weeks (20 hrs/wk). Midsemester admission is possible with the approval of the director. In summer semester, programs are offered for ten weeks. Students are placed at beginner, intermediate, or advanced levels by proficiency tests at the start of each program. An institutional TOEFL is administered at the conclusion of each semester.

The ALI also offers two less intensive programs: English for Specific Purposes (ESP) for graduate students entering specialized fields and English for Visitors (EV) for visiting professionals who seek improvement in English while experiencing life in the U.S. Special part-time credit programs can be arranged.

Cocurricular social and cultural programs are offered to all students.

Finances

Institutional Fees*

**The university reserves the right to change its fees without notice. For the most current fee schedule, see* www.iup.edu/stufinancialserv.

The tuition and fees set forth in this section were those in effect in May, 2001. The fee schedule is subject to change; these figures are to be considered simply as an estimate. A current fee schedule may be obtained by writing to the Admissions Office, IUP, by phoning 724-357-2230, or by visiting our website at *http://www.iup.edu/stufinancialserv.*

Tuition

The tuition for all full-time in-state students is $1,896 per semester. This covers the keeping of student records, use of the library, student welfare, and laboratory facilities. An additional $158 per semester hour will be charged for undergraduate semester hours scheduled in excess of eighteen. The tuition for part-time in-state undergraduate students is $158 per semester hour. A part-time undergraduate student is one taking 11 or fewer semester hours. See the sections on Admissions and Registration and on Academic Policies for further information concerning part-time students.

Out-of-state full-time students pay tuition of $4,740 per semester. An additional $395 per credit will be charged for semester hours in excess of eighteen. The tuition for part-time out-of-state students is $395 per semester hour. The definition of an in-state student is based on domicile. An in-state student is one who has been domiciled in Pennsylvania for at least one year preceding attendance at any institution of higher education in the state of Pennsylvania. A minor is presumed to have the domicile of his/her parents or legal guardian. Students who have any question whatsoever concerning their domicile should read the official text of the rules, as published in Volume 22, Pennsylvania Code, Section 507.1 through 507.11.

Audit Fee

Full standard fees will be assessed for each course audited, exception being persons on Social Security or equivalent retirement benefit, who will be given remission of basic fees for such classes where space is available.

Bad Check Charge

Students making checks payable to "Indiana University of Pennsylvania" which are not acceptable to the bank for any reason will be charged $10 for each bad check in the amount of $.01 to $49.99 and $20 for bad checks written for $50 or more.

Dining Plan Fee

The semester fees for dining plans, effective June, 2001, are:

- **Plan A/F**—19 meals a week + $100 in Flex money $883
- **Plan B/F**—14 meals a week + $150 in Flex money $887
- **Plan B**—14 meals a week $737
- **Plan C/F**—Any 165 meals a semester + $150 in Flex money $874
- **Plan D/F**—Any 10 meals a week + $200 in Flex money $906
- **Plan E/F**—Any 75 meals a semester + $150 in Flex money $589

Meals provided through these plans are for the use of the contract holder only.

Flex money can be carried from fall to spring semester; however, any portion not used by the end of the spring semester will be forfeited. Flex may be used for guests.

Educational Service/Facilities Fee

All students are charged an educational service fee to support academic equipment and library resources. In order to support maintenance and repair projects, recreational facilities, and the advancement of technologies, all students are also assessed a facilities fee. These fees are combined into one Instructional Fee which is equal to 10 percent of the undergraduate in-state tuition rate.

Financial Delinquency Policy

Registration is not complete until a student pays the fee for such registration and the university reserves for itself the right to bar a nonpaying student from classes. When it has been determined during the course of a semester that a student's account has become delinquent from accrued charges, the Registrar's Office will be notified of this delinquency and advised to refrain from reporting the student's grades and

from issuing any transcripts for that student's work until the delinquent account has been satisfied. Faculty members will continue to submit a grade for the financially delinquent student; however, requests from students will not be honored, and official reports will be released by the Registrar's Office only after the student has cleared his or her account or has established a payment plan satisfactory to the Accounts Receivable Office.

Health Services Fee

The mandatory student health fee is assessed each semester based upon enrollment status at the university. Full-time undergraduates are assessed Fee A and part-time undergraduates are assessed Fee B.

- Health Service Fee A: $83 (mandatory for all full-time undergraduate students). Includes most clinical and educational services as well as dispensing of most commonly prescribed medications ordered by the Health Center medical providers. The health service does not fill prescriptions ordered by outside medical providers.
- Health Service Fee B: $31 (mandatory for all part-time undergraduate students and full-time graduate students). The fee offers self-care cold clinic, flu shots, TB tests, and health and wellness programming.
- Several services are available on a fee-for-service basis.

Students enrolled in Health Service Fee B have the option of upgrading their service by paying Fee A or they may choose to pay a per-visit fee. Spouses of IUP students may enroll in A, B, or pay a per-visit fee. The student health fee is waived on a semester-by-semester basis only for students living more than sixty miles from campus or who are on internships or student teaching assignments at a site more than thirty miles from campus. Students attending branch campuses have health fee options and should contact their branch campus director. For further information on the health center, contact the University Health Service at 724-357-6475.

International Student Orientation Fee

An international student orientation fee of $30 will be charged to all international students who register for the IUP orientation program to support associated costs.

Late Registration Fee

Students who desire to register on the day prior to the start of classes, designated by the university as Late Registration Day, will be assessed a Late Registration Fee of $50. Students who register for classes after completion of the university's Late Registration Day will be assessed a Late Registration Fee of $100. Exceptions to this fee may be granted by the provost or designee for students admitted late to the university for reasons deemed appropriate by the provost or designee.

Medical Technology Administrative Fee

A fee of up to $75 will be charged to each student enrolled at IUP but attending classes at designated clinical facilities. Fees are $20 (1-3 semester hours), $40 (4-6 semester hours), or $75 (7 or more semester hours). Tuition, room, and board charged for these students should be paid by the student directly to the hospital institution.

Miscellaneous Costs

In some courses, students are required to obtain supplies and materials to complete course projects. In many courses, a student may make a voluntary contribution to a cooperative fund established for the purpose of obtaining these supplies and/or services at a lower cost. Examples are art courses, field trips, etc.

National Student Exchange Program Fee

A one-time $75 nonrefundable fee will be charged to IUP students participating in the National Student Exchange Program. Students attending IUP under the National Student Exchange Program will be charged the Pennsylvania resident basic fee and have the application fee waived.

Off-Campus Instructional Fee

An off-campus instructional fee of 10 percent of the undergraduate in-state tuition rate will be charged to students taking courses at an off-campus site and/or using distance education technology through the School of Continuing Education to cover operating costs for services and instructional support at off-campus sites.

Registration Fee

All students will be charged a registration fee of $20 per semester.

Residence Hall Fee

The 2001-02 academic year room fees for residence hall students are $1,103 a semester for a double-occupancy university residence hall room and $1,661 for single university residence hall rooms. Resident students are required to have a dining plan and can select from five plans (see Dining Fees).

Student Activity Fee

An activity fee is collected from all students and administered through the Student Cooperative Association under regulations approved by the Council of Trustees. This fee of $125.50 per semester covers the cost of student activities in athletics, lectures, entertainment, student publications, etc., and is payable in one sum for the semester. The Student Activity Fee is $52 for part-time students. These fees apply to Indiana campus students only. Students attending the Armstrong or Punxsutawney campuses pay $119 per semester full-time and $45.50 part-time. (These fees are subject to change without notice during the academic year.)

Testing Fee

Each entering freshman must participate in placement testing during the summer immediately preceding the student's matriculation on campus. A fee of $75 is assessed for this overnight, two-day experience for students admitted to the Indiana campus. Parents pay a nominal fee for their participation in the accompanying parent orientation program. Branch campus students participate in a summer one-day diagnostic testing experience with a fee of $45. Students receive information about the summer testing program prior to the testing date(s). Fees are included in the regular billing and are nonrefundable. Please see the catalog section on Orientation for further information about the Summer Orientation: Preregistration Placement Testing, Advising, and Course Selections Program.

Estimated Expenses Per Semester

	In State	*Out-of State*
Tuition	$1,895	$4,740
Housing	1,103	1,103
Meals	883	883
Student Activity Fee	126	126
Health Fee	80	80
Instructional Fee	approx. 190	approx 190
Registration Fee	20	20
Books and Supplies*	500	500
	$4,797	$7,642

Miscellaneous and travel expenses would be in addition to the above.

*Cost of books and supplies may vary depending on major and class enrollment.

Summer Sessions Fees

Basic Fee

The basic fee for in-state undergraduate students enrolled for any of the regular summer sessions is $158 per semester hour. The basic fee for out-of-state undergraduate students is $395 per semester hour.

Summer Dining Plan Fees

The five-week session dining plan fees for summer, 2001, are:

- **Plan A**—19 meals a week
  $244 (or $48.80/week)
- **Plan B**—Any 14 meals a week
  $230 (or $46/week)
- **Plan D**—Any 10 meals a week
  $220 (or $44/week)
- **Plan G**—Any 5 meals week
  $135 (or $27/week)

Educational Service/Facilities Fee

All students are charged an educational service fee to support academic equipment and library resources. In order to support maintenance and repair projects, recreational facilities, and the advancement of technologies, all students are also assessed a facilities fee. These fees are combined into one Instructional Fee which is equal to 10 percent of the undergraduate in-state tuition rate. During the summer, all students are charged per credit.

Registration Fee

All students will be charged a registration fee of $20 for the summer term.

Residence Hall Fee

The 2001 summer university dorm room fees are $75 a week for a double-occupancy room and $110 a week for a single room. Students are charged for each session according to the number of weeks they will require housing. Resident students can select from two dining plans, 19 meals/week or 14 meals/week.

Student Activity Fee

For each of the two summer sessions, this fee is $40 per session. For special summer courses, the fee is $8 per week.

Student Health Fee

Each undergraduate and graduate student enrolled in IUP summer sessions will be assessed $3 per semester hour to cover "Health Fee B" (see description of health fees). All other fees are optional. Contact the University Health Service at 724-357-6475 for fee information.

Special Fees

Damage Fee
Students are responsible for damages, breakage, loss, or delayed return of university property.

Degree Fee
A fee of $30 will be charged each candidate for a degree at the time of approval of application for graduation. This fee is to cover costs of preparing diplomas and the graduation ceremony.

Examination for Credit Fee
A fee of $40 will be assessed for each examination taken for credit.

Installment Payment Charge
A nonrefundable fee of $30 per semester is charged to students participating in the monthly installment payment plan, and a $10 per semester fee is charged for students participating in the semi-semester option of the plan.

Portfolio Application/ Assessment Fees
A fee of $15 will be charged to students applying for prior learning evaluation, and a fee equal to one-half of the prevailing tuition fee will be charged for all semester hours granted in the portfolio application.

Teacher Certification Fee
A fee of $40 will be charged to cover the administrative and recording costs for the issuance of a teaching certificate by the Department of Education. A $25 fee is charged for students applying for out-of-state certification.

Transcript Fees
Applications for transcripts must be made only in writing to the registrar, either by U.S. mail or on forms available at the Registrar's Office in Clark Hall. Such requests must include

1. Your full name and Social Security number as of your graduation or termination of enrollment at IUP. (Please note any name changes since graduation.)
2. Your present address.
3. Whether you graduated or, if not, when you were enrolled.
4. The full and clearly stated name(s) and address(es) of person(s) to whom you wish the transcript(s) sent.

A transcript fee of $5 is charged for each copy. Checks or money orders should be made out to Indiana University of Pennsylvania. An additional charge will be assessed for express transcript service. Please call 724-357-2217 for current transcript fee information.

Official transcripts (containing signature and university seal) will not be issued to students directly. The university will attempt to mail official transcripts within a reasonable time. However, in the event of its failure to do so, damages will be limited to the fee, if any, paid by the student for the copy or copies of the transcript. In no case is the university responsible for consequential damages.

Billing and Payments

All bills, including basic fee and housing fee, are payable as specified on the billing notice; students have several payment plan options. Checks or money orders, in the exact amount of the billing notice, should be made payable to IUP unless otherwise specified. MasterCard, Visa, and Discover cards are also accepted. Book Store purchases are on a cash basis.

It is desired that payments for the entire semester be made in August for the first semester and in December for the second semester; however, for a nominal charge an installment plan is available.

Payment of Financial Aid

The following financial aid programs can be deducted from your university bill:

Federal Stafford Loan
Federal PLUS Loan
Federal Perkins Loan
Federal Pell Grant
Federal Supplemental Educational Opportunity Grant
Pennsylvania State Grant
IUP scholarships

Federal Work Study earnings are paid directly to the student every other week and thus are not used for billing purposes.

All other financial aid is paid directly to the student's account. If a credit balance exists after satisfying all IUP charges, excess funds will be refunded to the student for other educational expenses.

Delinquent Accounts

Students will not be permitted to enroll for any semester, receive transcripts, or graduate until all account balances have been paid in full. In addition, credit will not be certified to any other institution or the Department of Education until all overdue accounts have been paid. A late payment fee of $10 for each day past the due date will be assessed for delinquent accounts up to a maximum of $50. The same regulations will also be applied to inter-semester payments.

Undergraduate students desiring to leave school before the close of a semester must report to the Advising and Testing Center and to the Accounts Receivable Office to settle all unpaid accounts.

IUP Refund Policy

For a copy of IUP's Refund Policy or a sample refund calculation, please contact Student Financial Services at 724-357-2207. The Refund Policy is also available on their website at *www.iup.edu/stufinancialserv.*

Financial Aid

The Financial Aid Office, located at Clark Hall, offers financial information and counseling to all students attending IUP. The types of financial assistance offered by the Financial Aid Office include student employment, educational loans, and grants. Counseling on debt management and loan repayment options is also available.

Eligibility Requirements
The general requirements for financial aid eligibility include the following:

1. Be enrolled on at least a half-time basis (6 semester hours per term) except for the Federal Pell Grant program.
2. Be a U.S. citizen, national or permanent resident, or other eligible noncitizen.
3. Maintain satisfactory academic progress in your course of study.
4. Be enrolled or accepted for enrollment in an Associate Degree, Bachelor's Degree, Post-Baccalaureate Teacher's Certification program, or Post-Baccalaureate Second Undergraduate Degree program.
5. Not be in default or have failed to make satisfactory arrangements to repay any Federal Student Loans. Not owe a repayment on a Federal Pell Grant or Federal Supplemental Educational Opportunity Grant.
6. Not have borrowed in excess of any Federal Loan limits.
7. Register with the Selective Service Administration, if required.
8. Have a valid Social Security Number.

Students must complete a *Free Application for Federal Student Aid* (FAFSA) prior to April 15 in order to receive maximum consideration for need-based financial aid administered through the university. The Title IV school code for IUP is 003277. Additional forms or applications may be required depending upon which student aid programs are being sought. Financial aid is available for both the regular academic year and the summer sessions. Separate applications for summer school aid must be submitted by the student.

Student Responsibilities—Students who apply for financial aid have certain responsibilities which are listed below:

1. Accurately complete and submit the appropriate application forms by the published deadline dates.
2. Submit requested materials, corrections, or new information on a timely basis.
3. Meet the regulations and repayment schedules of student loans.
4. Inform the Financial Aid Office of any grants, scholarships, or loans received from outside organizations.
5. Inform the Financial Aid Office of any information that has changed since applying for aid.
6. Understand the satisfactory academic progress requirements for maintaining financial aid eligibility.
7. Use financial aid funds for educational purposes only.

Financial Aid Programs Available

Financial assistance is available in the form of grants and scholarships, student employment, and educational loans. Each of these funding sources has unique characteristics which are explained in more detail below.

Employment

The Student Employment Center is available to assist students in finding job opportunities on campus or in the local community. Students may gain access to a listing of available positions by doing any of the following:

- asking to review the employment binder located in the Student Employment Center in the Office of Career Services, 302 Pratt Hall
- reviewing the bulletin board outside the office
- picking up a printout outside the office and in the lobby of Clark Hall
- accessing the on-line job listing at *http://www.iup.edu/career/studentemployment.htm* (24-hour accessibility)

The Student Employment Center also assists students in finding summer employment. During the Spring semester, a Summer Job Fair is conducted which gives IUP students the opportunity to meet with representatives from a variety of organizations (i.e., camps, amusement parks, resorts, recreation areas, and restaurants, to name a few). Representatives of many local and out-of-state organizations attend the fair. Information is available in the Office of Career Services.

Students may be employed on campus for up to twenty-five hours per week when classes are in session and up to forty hours per week during vacation periods. When classes are in session, most students work an average of ten to twelve hours per week. Students are paid for the hours they have worked every two weeks. Undergraduate students are paid at the minimum wage rate, which is currently $5.15 per hour.

There are two different types of student employment on campus: Federal Work Study (FWSP) and University Employment (UE). Eligibility for FWSP is based on financial need, which is determined by the *Free Application for Federal Student Aid*. A FWSP application must also be completed in the Financial Aid Office. For students who do not demonstrate financial need but who would still like to work on campus, there is a UE program, which also offers students the opportunity to work. Interested students should apply directly to the campus department in which they would like to work.

A Federal Work Study award may affect your eligibility for student loans. For more specific information on how a Federal Work Study award would impact your loan eligibility, inquire at the Financial Aid counter in the lobby of Clark Hall or by e-mail at *financial-aid@grove.iup.edu*.

Off-campus employment opportunities vary by organization, as do the hourly wages and hours worked per week.

Community Service Program—This employment program places FWSP-eligible students in community service positions available both on and off campus. In addition to earning money, students gain practical work experience related to their academic major. The Office of Service Learning located in 103 Pratt Hall assists students with placement.

PHEAA State Work Study—Off-campus employment that relates to the student's academic major may be available through the PHEAA State Work-Study program.

Applications are available in the Financial Aid Office and must be completed by both the student and the organization for which the student would like to be employed. Applications can also be accessed through PHEAA's web site at *http://www.pheaa.org*.

Educational Loans

Loan programs offer repayable assistance to students who apply and qualify for them. Repayment terms, interest rates, and borrowing limits vary from program to program. Educational loans are a serious and important obligation. Receipt of funds means that the student assumes the legal responsibility for repayment of the loan at a future date. The promissory note for the loan specifies the terms and conditions under which the student is borrowing and the repayment provisions that are in effect. Participation in Community Service positions after leaving school may provide for repayment of certain student loans.

Federal Perkins Loan—The application for the Federal Perkins Loan is the *Free Application for Federal Student Aid* (FAFSA). The loan is awarded to students on the basis of financial need and FAFSA receipt date of April 15 or earlier. Students who receive this loan must be enrolled for at least 6 semester hours each semester. There are no principal or interest payments until nine months after the student ceases half-time attendance (6 semester hours per term). The minimum repayment rate is $40 per month at a simple interest rate of 5 percent per year on the unpaid balance. There are deferment and cancellation provisions available.

Federal Stafford Loan—The application for the Federal Stafford Loan is the *Free Application for Federal Student Aid* (FAFSA). By responding on the FAFSA that you are interested in a student loan, one will be processed for you. First-time borrowers will also receive a Federal Stafford Loan Master Promissory Note (MPN) in the mail for completion in order to finalize the approval process.

Through this program, freshmen may borrow up to $2,625 per academic year, sophomores may borrow up to $3,500 per academic year, and juniors and seniors may borrow up to $5,500 per academic year. Subsidized Federal Stafford Loans are awarded on the basis of financial need as determined by the *Free Application for Federal Student Aid* (FAFSA) and require no payment of interest or principal until six months after the student ceases half-time enrollment (6 semester hours per term). Unsubsidized Federal Stafford Loans require payment or capitalization of interest only during periods of enrollment and the six-month grace period. Following the grace period, both types of Federal Stafford Loans are repayable to the lender at a variable interest rate not to exceed 8.25 percent.

Federal Stafford Loan entrance counseling must be completed by first-time borrowers at IUP before funds can be released.

Additional unsubsidized Federal Stafford Loan funds are available to independent undergraduate students. Freshmen and sophomores may request up to $4,000; juniors and seniors may request up to $5,000. Dependent students whose parents cannot obtain a Federal PLUS Loan may also apply for these additional unsubsidized funds.

Federal PLUS Loan—Parents interested in obtaining a Federal Parent Loans for Undergraduate Students should contact the Pennsylvania Higher Education Assistance Agency (PHEAA) in order to establish their eligibility for the loan through PHEAA's pre-approval process. PHEAA can be contacted at 1-800-692-7392. Applications will be forwarded to eligible families. Parents may borrow for their dependent children up to the cost of education minus other financial aid. The loans are repaid at a variable interest rate not to exceed 9 percent per year starting sixty days after the final check is issued.

Grants

Grants are funds which carry no obligation for repayment. These funds are awarded to the student on the basis of financial need.

Federal Pell Grant—The Federal Pell Grant program provides funds to eligible undergraduate students who have not earned a first bachelor's degree. A *Free Application for Federal Student Aid* (FAFSA) must be filed annually to apply for this grant. Awards are prorated based upon the number of semester hours for which a student registers.

Federal Supplemental Educational Opportunity Grant—Federal Pell Grant-eligible students are considered for Federal Supplemental Educational Opportunity Grants (FSEOG). A *Free Application for Federal Student Aid* (FAFSA) with a receipt date of April 15 or earlier must be on file. Students who receive FSEOG must be enrolled for at least 6 semester hours each semester.

Pennsylvania State Grant (PHEAA Grant)—PHEAA Grants are available to eligible part-time and full-time undergraduate students who are Pennsylvania state residents. Part-time recipients must also meet specific PHEAA income guidelines. You must complete a *Free Application for Federal Student Aid* (FAFSA) by April 15 to apply. Academic progress guidelines require that a student earn 12 new semester hours for each full-time semester for continued eligibility of grant funds. A maximum of eight full-time or sixteen part-time semesters of eligibility are permitted.

State Grants—Many state educational agencies offer grant assistance to students who study outside of their state of residency. Out-of state students are encouraged to investigate opportunities for grant funding from their home state.

University Loan Fund

The Financial Aid Office, in conjunction with the Student Cooperative Association, administers the University Loan Fund on behalf of IUP students. Loans are only available to students who are expecting a financial aid refund that is yet to be disbursed. The maximum loan available will be $300 with repayment to be made in sixty days. No interest will be charged for these loans. Loans will be made to meet educational expenses only. Applications for the University Loan and additional information may be obtained at the Financial Aid Office.

The University Loan Fund encompasses the following individual loan accounts:

Jennie E. Ackerman Loan Fund
Robert Bellis Loan Fund
Mary Edna Flegal Loan Fund
Colette Cromer Gershman Loan Fund
Margaret Flegal Harte Loan Fund
Suzanne Marshall Hartman Loan Fund
John Hays Memorial Fund
Oliver W. Helmrich Memorial Loan Fund
William Henzelmann Memorial Fund
Mary Anne Kolessar Loan Fund
Jane E. Leonard Memorial Loan Fund
Mack Loan Fund
Rusty Preisenderfer Memorial Loan Fund
Flossie Wagner Sanford Student Loan Fund
Varsity I Loan Fund
Norah Zink Loan Fund

Scholarships

Departments, colleges, and the Provost's Office administer various scholarship programs that have been established by alumni and friends of the university. These scholarships serve to recognize academically talented students and assist them in financing their educational expenses. No general application is required for consideration. All eligible students are automatically considered for scholarship opportunities. Questions may be directed to the college dean or department chair of the student's intended major or current major for enrolled students.

Eberly College of Business and Information Technology

Robert C. Camp, Dean; 724-357-7889

For Scholarship information, contact:
Julie Moreland, Assistant to the Dean, 724-357-7889

►*Scholarships for incoming freshmen:*

Board of Governors Scholarship
Robert and Irene Bozzone Scholarship
George M. Burke Memorial Fund
Marie A. Canedy Scholarship for Business
Carino Family Business Scholarship
Charles L. Cooper/Accounting Alumni Scholarship
Dressel Family Scholarship
Terry and Mary Jo Dunlap Scholarship
Eberly College Brick Scholarship
Eberly Family College of Business Scholarship
FCFC/NBOC Scholarship
Mary Harte Scholarship
Robert L. Hite Scholarship
Eileen Quinn Hull Memorial Scholarship
Indiana First Bank Scholarship
IUP Alumni Association Scholarship
Fred E. Kunkle (Evergreen Motors) Foundation for IUP Distinguished Scholars Award (awarded by the University Scholarship Committee)
Arveta DeGaetano McNaughton Memorial Scholarship
National City Bank of Pennsylvania Scholarship
Carl E. Patchin Foundation for IUP Distinguished Scholars Award (awarded by the University Scholarship Committee)
Everett and Lavina Peterman Scholarship
Virgil and Virginia Vaughn Family Scholarship

►*Scholarships for currently enrolled students:*

J. Donald Bartolomucci Scholarship
Robert and Irene Bozzone Scholarship
Charles L. Cooper/Accounting Alumni Scholarship
Dressel Family Scholarship
Eberly College Brick Scholarship
Eberly Family College of Business Scholarship
Fredericks Family Scholarship
Fredericks Michael and Company Scholarship
Hart Chemical Entrepreneur Scholarship
Mary Harte Scholarship
Eileen Quinn Hull Memorial Scholarship
Edward and Cecelia Mackey Scholarship
Technology Support and Training Scholarship
Undergraduate Scholarship
Murray M. Varner Memorial Scholarship

College of Education and Educational Technology

John Butzow, Dean; 724-357-2482

►*Scholarships for incoming freshmen:*

Marion Cox Burchfield Scholarship for Secondary Education in Geography/English
Ruth Cox Claypoole Scholarship for Elementary Education
IUP Alumni Association Scholarship

Carol L. Moorhead Scholarship
Ethel L. Morrow Memorial Scholarship
Lulu Braughler Stewart Memorial Scholarship
Barbara Stott Thomas Memorial Scholarship

►*Scholarships for currently enrolled students:*

Jemima S. Boyd Scholarship
Maude O. Brungard Scholarship
Beverly Sue Clark Memorial Scholarship
Mary Flegal Harte Scholarship
Tony Kuczinski Memorial Scholarship
McFarland Scholarships
Helen Wood Morris Scholarship
Dr. Russel C. Nelson Scholarship
Pathways to Urban Education Scholarship
Felicia G. Renck Scholarship
Edwina Battle Vold Preservice Teachers Scholarship
Margaret Walker Skiles Memorial Scholarship
Marion Welsch Memorial Scholarship

College of Fine Arts

Michael J. Hood, Dean; 724-357-2397

►*Scholarships for incoming freshmen:*

Wallis and Janet Braman Music Scholarship
Freshman Music Scholarship
Ann M. Hayward Music Scholarship
IUP Alumni Association Scholarship
Gloria Bryan Johnson Memorial Scholarship
Orval and Marian Kipp Memorial Art Scholarship
Joanne P. Lovette Memorial Fund
William P. Moorhead Scholarship
Organ Music Scholarship
Evelyn Swauger Memorial Scholarship
Theater-by-the-Grove Freshman Talent Scholarship

►*Scholarships for currently enrolled students:*

Robert K. Alico, Jr., Memorial Scholarship
Lloyd and Libby Bastian Memorial Scholarship
M. Vashti Burr Memorial Award
Charles A. Davis Music Endowment
Donald G. Eisen Scholarship
Thomas V. Frazier Memorial Scholarship
H. Eugene Hulbert Music Scholarship
Gloria Bryan Johnson Memorial Scholarship
Mary Helen Krouse MacDonald Memorial Scholarship
Benjamin T. Miller Art Scholarship
Mary H. Muldowney Music Scholarship
Gary Olmstead Percussion Scholarship
Shelly G. Portman Memorial Scholarship
Ralph Reynolds Memorial Scholarship
Ralph Reynolds Memorial Scholarship (Painting)
Frank Ross Memorial Scholarship
James and Jamie Self Tuba Scholarship
Jean J. Slenker Memorial Art Scholarship
Student Art Scholarship Award
Evelyn Swauger Memorial Scholarship
Carol Teti Memorial Organ Music Scholarship

College of Health and Human Services

Carleen C. Zoni, Dean; 724-357-2555

►*Scholarships for incoming freshmen:*

IUP Alumni Association Scholarship
Elizabeth LaVelle Scholarship Fund
A. Laura Mateer Memorial Scholarship
Susan Spurlin Peckman Memorial Scholarship

►*Scholarships for currently enrolled students:*

Grace J. Allman Safety Science Scholarship
Ella C. Bendix Home Economics Loan Fund
The Brody Family Nursing Scholarship
Alexa J. Boyer Emerick Memorial Scholarship
Susan E. Finley Scholarship for Home Economics
Eleanor Gallati Scholarship
William G. Gressley Memorial Scholarship
Hoss's Steak and Seafood House Scholarship
Eugene E. Lepley Memorial Scholarship
M. Jane Segar Longenecker Scholarship
Amy McCauley Memorial Scholarship for Respiratory Care
Marian A. Murray Scholarship
Robert and Ruth O'Connor Scholarship for Home Economics Education
Ethyl V. Oxley, Opal T. Rhodes, and Helen C. Merriman Scholarship
Pittsburgh Home Economics Teachers Scholarship
Tony and Emma Ricupero Memorial - Rustic Lodge Scholarship
Ella B. Seanor Leadership in Nursing Scholarship
Susan E. Shubra Scholarship
Kay Staszkiewicz Memorial Nursing Scholarship
Student Awards - Nursing
Betty Wood Scholarship
Ronald and Jean Zucchelli Scholarship

College of Humanities and Social Sciences

Brenda Carter, Dean; 724-357-2480

►*Scholarships for incoming freshmen:*

George Chressanthis Department of Economics Scholarship
IUP Alumni Association Scholarship

►*Scholarships for currently enrolled students:*

Mollie E. Bolling Memorial Scholarship
George Chressanthis Department of Economics Scholarship
Isolde A. Henninger Award
Hunt-Pickering Study Abroad Scholarship
John F. Kadluhowski Memorial Scholarship for History
Dr. Yu-Chen Liu Memorial Endowment

Mexico Study Abroad Scholarship
Nancy France Scholarship Fund
Esko E. Newhill Award for Excellence
John J. Prandy Memorial Scholarship
David J. Rovnan Memorial Scholarship
David A. Schwartz Memorial Journalism Scholarship
Gregory Spinelli Memorial Scholarship
Study Abroad - Foreign Language Scholarship
Valladolid Scholarship
Donald A. Walker Economics Scholarship
Jacque Alexis Watson Memorial Scholarship for Criminology
Milton and Sarah Weisberg Memorial Scholarships for Industrial and Labor Relations

College of Natural Sciences and Mathematics

John S. Eck, Dean; 724-357-2609

►*Scholarships for incoming freshmen:*

Edward N. Brown Memorial Scholarship
Barry A. Day Mathematics Scholarship
IUP Alumni Association Scholarship
Natural Sciences and Mathematics Scholarship

►*Scholarships for currently enrolled students:*

Ida Z. Arms Excellence Scholarship
Edward N. Brown Memorial Scholarship
Chairman's Scholarship Fund
Roy A. Daugherty Scholarship
William Heard Memorial Scholarship
Dr. Willard W. Hennemann, Jr., Memorial Scholarship
Stanley W. Lore Scholarship
Ronald E. Marks Scholarship
Mathematics Graduate Scholarship Fund
Arthur G. Morrell Memorial Scholarship
Albert R. Peehan Scholarship
PPG Computer Science Scholarship
Daniel Reiber Memorial Scholarship for Physics
Mildred M. Reigh Memorial Scholarship
Thomas Smyth Memorial Scholarship
Howard E. Tompkins Scholarship

Robert E. Cook Honors College

Janet E. Goebel, Director; 724-357-4971

►*Scholarships for incoming freshmen:*

Madeline T. Ackerman Memorial Scholarship
ARAMARK Distinguished Scholars Scholarship
Board of Governors Scholarships
Robert E. Cook Honors College Scholarship
Terry and Mary Jo Dunlap Scholarship
Natalie S. Fassett Scholarship Fund (awarded jointly with the University Scholarship Committee)
Foundation for IUP Distinguished Scholars Awards
Theresa Hart Gramley Memorial Scholarship (awarded jointly with the University Scholarship Committee)
Dorothy Brown Pettit Gregory Memorial Scholarship
Earl and Frances Kinney Memorial Trust Scholarship
Kresge Foundation/Cook Honors College Scholarship
Colonel Leonard A. and Mary D. McQuown Memorial Fund (awarded jointly with the University Scholarship Committee)
Anthony and Emma Calvetti Morino Memorial Scholarship
Dr. and Mrs. Arthur W. Phillips Scholarship Fund (awarded jointly with the University Scholarship Committee)
T. W. Phillips Gas and Oil Company Scholarship
Margaret Walker Skiles Memorial Scholarship
Florence Wallace Scholarship Fund (awarded jointly with the University Scholarship Committee)

Miscellaneous Scholarships

Diane R. Rayback, Associate Dean of Admissions; 724-357-2230

►*Scholarships for incoming freshmen:*

Board of Governors Scholarships (awarded jointly with Honors College, Office of Admissions, and Office of Student Affairs)
Gloria J. Croft Bolinger Memorial Scholarship
Nadav and Nancy Baum Scholarship
Ruth Bowman Memorial Scholarship
Carino-Evergreen Ambassador Scholarship
Iva Carlson Memorial Scholarship
Colonial Motor Mart Scholarship
Coraopolis Wolves Club Den IX Scholarship
Foundation for IUP Volunteer Service Award
W.R. Hevner Family Scholarship
Patti Hurley Scholarship
Natalie S. Fassett Scholarship Fund (awarded jointly with the University Scholarship Committee)
Foundation for IUP Distinguished Scholars Awards (awarded jointly with University Scholarship Committee and Honors College)
Theresa Hart Gramley Memorial Scholarship (awarded jointly with the University Scholarship Committee)
Kovalchick Family – St. Mary's High School Scholarship
Thomas and Flora McGrainor Memorial Scholarship
John W. McNaul Memorial Scholarship
Colonel Leonard A. and Mary D. McQuown Memorial Fund (awarded jointly with the University Scholarship Committee)
Frank E. Moore Family Scholarship Endowment
Morino Family Scholars Award
G. William and Julia Musser Scholarship
Margaret M. Patton Foundation Scholarship
Dr. and Mrs. Arthur W. Phillips Scholarship Fund (awarded jointly with the University Scholarship Committee)
William E. Pierce Scholarship
President's/Corrine Menk Wahr Scholarship
Martha S. Scheeren Scholarship
Joseph W. Serene Memorial Scholarship
Robert R. Sheetz Memorial Scholarship
Sons of Italy Recreative Club, Inc., Scholarships
Michael J. Supinka, Jr., Memorial Scholarship
Tomb Family Scholarship Fund
Vaughn Foundation
Florence Wallace Scholarship Fund (awarded jointly with the University Scholarship Committee)
West Branch Area High School Scholarship
Wienken and Associates Scholarship

►*Scholarships for currently enrolled students:*

African American Alumni Scholarship
American Association of University Women Scholarship
American Field Service (AFS) Scholarship
APSCUF Scholarship
Israel and Birdye Brody Scholarship
Dr. Howard B. Buterbaugh Scholarship Fund
Carino-Evergreen Ambassador Scholarship
Clark Scholarship
Foundation for IUP Volunteer Service Award
Robert Goldstrohm/Citizen's Ambulance Scholarship
Virginia Deem Hadley Memorial Scholarship
Harrisburg Alumni Chapter of IUP Scholarship Fund
Indiana County Alumni Chapter Scholarship
IUP Ambassadors Scholarship
IUP APSCUF Scholarship
IUP Student Ambassadors Scholarship
Kuzneski Family Scholarship
Miss IUP Scholarship
Margaret M. Patton Foundation Scholarship
Lenora Peehan Scholarship
Phi Delta Theta Memorial Scholarship
William E. Pierce Scholarship Fund
Saco Excelling Greek Scholarship
Ethel Seavey Simpson Scholarship
Senior Class Scholarship Award
Patricia Shields Memorial Scholarship
Senator Patrick J. Stapleton, Jr. Memorial Scholarship
Tomb Family Scholarship Fund
Luhelen Grace Whisner Memorial Scholarship
Wienken and Associates Scholarship
Damian Wright Memorial Scholarship for ROTC
Zonta Club of Indiana Scholarship for Women

Athletic Scholarships

Frances A. Nee, Athletics; 724-357-2779

►*Scholarships for incoming freshmen and currently enrolled students:*

Bratton-Hathaway Scholarship
Martha Crooks Douds Scholarship
Jack Crossan Memorial Scholarship
Owen J. and Virginia Dougherty Memorial Scholarship
Elite Eight Men's Basketball Scholarship
Nancy L. Ferguson Memorial Scholarship for Football
Shirley and Julius Fidcik Scholarship for Women's Basketball
Michael Gendich Endowment for Athletics
IUP Crimson Commons Scholarship
S. W. Jack Scholarship Fund
Harold Jacoby Memorial Scholarship for Golf
Ward C. and Sally B. Johnson Memorial Scholarship
Keystone Rehabilitation System's Men's Basketball Scholarship
Mr. and Mrs. Joseph Kovalchick Athletic Scholarship
Regis A. McKnight Memorial Scholarship
Bob McQuaide Memorial Scholarship for Football
Men's Basketball Letterman Scholarship
Men's Basketball Scholarship
Louis J. Nocco Scholarship
Larry Panaia Scholarship for Football
Raymond P. Phillips Memorial Scholarship for Football
Ruth Podbielski Scholarship
Willis Pratt Football Scholarship
Richard "Moe" Smith Endowment Scholarship
Sam Smith Football Scholarship
Sons of Italy Recreative Club Inc. Athletic Scholarship
Cecil and Ann Spadafora Scholarship for Football

Cecil C. Spadafora IUP Golf Invitational Fund
Paul E. and Josephine F. Spears Scholarship
Gerald E. Stossel Memorial Football Scholarship
Student Co-op Women's Athletic Scholarship
Saul and Louise Waxler Memorial Scholarship
Women's Basketball Scholarships

School of Continuing Education

Nicholas E. Kolb, Dean; 724-357-2209

►***Scholarship for a currently enrolled student:***

Continuing Education Part-time Scholarship

Graduate School

James C. Petersen, Dean; 724-357-2244

Scholarship information is found in the Graduate School catalog, which can be obtained in Stright Hall.

Other Resources

Athletic Grants-in-Aid –IUP participates in intercollegiate athletics as a Division II institution and awards Athletic Grants-in-Aid in accordance with NCAA rules and regulations. Interested students should contact the Athletic Director, Memorial Field House, IUP, Indiana, PA 15705; telephone: 724-357-2751.

Resident Assistants—Upperclass students and freshmen at the end of their first year may apply to become resident assistants at IUP. Students earn a room and board waiver, as well as a small stipend, by working as resident assistants in IUP residence halls. Application timetables and deadlines are advertised in *The Penn* and posted in the residence halls and other locations around campus. The application process requires references, individual and group interviews, and participation in a semester-long training program prior to selection. Resident assistants are selected on the basis of leadership, interpersonal skills, and the willingness and ability to serve as role models. Resident assistants must have and maintain a 2.2 GPA. For further information, please contact present resident assistants or residence directors or the Office of Housing and Residence Life, 308 Pratt Hall, IUP, Indiana, PA 15705; telephone: 724-357-2696.

Private Scholarships—Various service clubs, organizations, churches, schools, and industries offer scholarships to students. High school guidance offices, libraries, and hometown newspapers are often excellent sources for information concerning private scholarships. A valuable resource on the Internet can be found at *http://www.fastweb.com.*

ROTC Scholarships—Two- and three-year scholarships are available to both male and female students who are enrolled in the Reserve Officer Training Corps program. The scholarships pay for tuition, fees, and books, plus $250 per month for ten months per school year. Interested students may obtain applications and criteria information by contacting the ROTC department in Pierce Hall at IUP or by calling 1-800-IUP-ROTC.

Office of Vocational Rehabilitation Assistance (OVR)—Students who have physical or learning disabilities may receive educational benefits through the Office of Vocational Rehabilitation. In order to be eligible, students must satisfy the physical and financial requirements of the agency. For further information regarding OVR, students should contact their county office of vocational rehabilitation.

Veterans Benefits

The Veterans Affairs Office certifies enrollment for undergraduate and graduate students who may be eligible for veterans assistance.

Veterans, reservists, and children of deceased or disabled veterans should contact the Veterans Affairs Office prior to enrollment.

Veterans must submit:

1. Application for Benefits (VA Form 1990)
2. Certified DD214

Reservists must submit:

1. Application for Benefits (VA Form 1990)
2. Notice of Basic Eligibility (DD2384)

Children of a deceased or disabled veteran whose death or injury was due to service-related causes may be eligible for educational assistance from the federal government under Law 634 (Dependents Educational Assistance Act). Immediately upon acceptance to IUP, men and women who qualify for such assistance should contact the veterans counselor and submit:

1. The Eligible Veteran DD214
2. Survivors Education Form 22-5490
3. Application for Benefits (VA Form 1990)

A veteran receiving VA benefits must request a change in curriculum clearance from the veterans counselor before changing curriculum. Twelve credit hours are required to be considered a full-time undergraduate student by the Veterans Administration. The minimum full-time requirement for a graduate student is 9 credit hours.

In addition to regular sources of financial aid, veterans and dependents of veterans may be eligible for VA benefits. For further information, veterans are urged to contact the Veterans Counselor, Clark Hall, IUP, Indiana, PA 15705, 724-357-3009.

Pennsylvania National Guard Educational Assistance Program (EAP)

The Educational Assistance Program has been established for members of the Pennsylvania National Guard. Students who make a commitment to serve in the Pennsylvania National Guard for six years may be eligible to receive a grant on a full- or part-time basis. If a student fails to fulfill his/her service commitment, any EAP grants which were previously received will be converted to loans and must be repaid with a 7-percent fixed annual interest rate. Applications and information are available from the individual's unit of assignment, the recruiting officer, the Pennsylvania National Guard at 717-861-8530, or by calling 1-800-724-7372.

Title IV Satisfactory Academic Progress Policy

In order to receive Title IV Federal Student Assistance, students must maintain satisfactory academic progress in their course of study. Students must be in compliance with both the university's Academic Standards Policy and the Financial Aid Sufficient Progress Policy in order to demonstrate satisfactory progress.

The Title IV Federal Student Assistance programs include the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal Perkins Loan, Federal Work Study Program, Federal Stafford Loan, and Federal PLUS Loan.

A student who meets the standard of academic good standing of the Academic Standards Policy but who does not meet the standard of sufficient quantitative progress may continue in university registration but without financial aid eligibility for the federal Title IV aid programs.

A full statement of requirements for Satisfactory Academic Progress for Title IV Federal Student Assistance is available through the Financial Aid Office.

Title IV Financial Aid Sufficient Progress Policy

The Financial Aid Sufficient Progress Policy applies to undergraduate students enrolled in the university.

A. Sufficient Progress: To be in good standing on a sufficient progress basis, a student must have earned at least 75 percent of the cumulative number of attempted semester hours at IUP and complete his/her degree without exceeding 133 percent of the semester hours required for completion.

"Attempted semester hours" is the number of semester hours for which a student is enrolled at the end of the Drop/Add period.

Each student will be measured for sufficient progress annually after fall grade processing. This evaluation will determine if the student has a sufficient percentage of semester hours earned in order to be eligible for Title IV funding for the next financial aid award year (Fall term through the following Summer term).

Students will be notified of their financial aid suspension status when a completed *Free Application for Federal Student Aid* (FAFSA) is on file in the Financial Aid Office.

B. Financial Aid Suspension: If a student does not meet the sufficient percent of progress evaluation after two consecutive annual reviews, then all Title IV aid for that student will be suspended beginning with the next financial aid award year (Fall term through the following Summer term).

A student who is in this financial aid suspension status, however, will also be reviewed at the end of the spring semester and summer terms in order to evaluate whether or not the percent of progress has been met through additional coursework. If this improvement to 75 percent of progress is achieved, then the student's Title IV financial aid suspension will be rescinded beginning with the next term of enrollment.

C. Time Frame for Degree Completion: In addition to meeting the 75 percent of progress requirement, all students must complete their degree requirements within an established time frame. Since enrollment status may vary from semester to semester, the maximum time frame for degree completion is measured in terms of semester hours attempted at IUP plus any semester hours accepted in transfer to IUP.

An undergraduate student in a program requiring 124 semester hours must complete the requirements for a bachelor's degree without exceeding 165 semester hours, including transfer semester hours and IUP registered semester hours. Note that 165 semester hours represents 133 percent of the semester hours required for completion of the degree. For majors with graduation requirements in excess of 124 semester hours, the maximum number of IUP registered semester hours plus transfer semester hours would increase proportionally.

D. Appeal Process: For students who have experienced unusual circumstances which have led to a lack of sufficient progress, such as medical emergencies or death of a family member, a written appeal may be submitted to the Financial Aid Appeals Committee for consideration of reinstatement of Title IV aid eligibility.

A student who would like to appeal his Title IV financial aid suspension for the next financial aid award year must submit a written appeal to the Financial Aid Appeals Committee. This written appeal must specifically outline the reason(s) for the deficiency and how the student will make up this deficiency. For students who do not appeal for fall review, or who are denied an appeal for the fall semester, an appeal for reinstatement of Title IV aid for the spring term will be accepted for review.

After reviewing the written appeal of a student in Financial Aid Suspension, the Financial Aid Appeals Committee may decide to reinstate Title IV financial aid eligibility for specific periods of the next financial aid award year. All appeal letters will be answered in writing by the Financial Aid Appeals Committee as to the approval or denial of the requested financial aid reinstatement.

E. Reinstatement of Title IV Aid Eligibility: For a student who has Satisfactory Academic Progress deficiency, one of the following must occur in order for that student to receive Title IV assistance:

1. The student can reestablish eligibility for Title IV assistance by meeting the minimum requirements for Satisfactory Academic Progress through additional periods of enrollment at IUP.
2. For a student who has not met the minimum criteria for Satisfactory Academic Progress due to unusual or mitigating circumstances and has filed an appeal(s) which has granted the student continuance of financial aid eligibility, Title IV aid funds may be reinstated.

F. Treatment of Audits, Incompletes, and Other Grades: In order that a student fully understands how various grades and enrollments impact upon the calculation of Satisfactory Academic Progress, the following information is provided:

1. **Audits and "S" and "U" Grades:** Because course audits and "S" and "U" grades carry no semester hours, they are not reviewed or counted for sufficient progress purposes.
2. **Incompletes:** Designations of "I," "L," "R," and "*" are treated as semester hours attempted/zero semester hours earned/no effect on QPA. However, these designations are treated as noncompleted semester hours and have an impact in the calculation of the percent of progress measure. (Note: The "*" is an administrative symbol indicating that a grade was not submitted by the instructor at the time of grade processing.)
3. **"F" Repeat with Replacement:** An "F" repeat with replacement is treated as semester hours attempted/semester hours earned/with the quality points of the new grade replacing the 0.00 QP of the original "F" grade. An "F" repeat has a positive effect on the QPA and the percent of progress even though it represents an additional number of semester hours attempted in regard to the percent of progress measure.
4. **"D" Repeat with Replacement:** Repeated classes that are "D" replacements to a student's record are treated as semester hours attempted/zero semester hours earned/with the quality points of the new grade replacing the 1.00 QP of the "D" grade. A "D" repeat with replacement may improve a student's QPA but decreases your percent of progress.
5. **Repeats with Averaging:** Courses that are repeated with averaging count as semester hours attempted/semester hours earned/with the quality points for the class averaged into the QPA. The maximum time frame for degree completion may be impacted by repeat with averaging classes.
6. **Withdrawals:** Designations of "W" and "Q" are treated as semester hours attempted/zero semester hours earned/no effect on QPA. Any type of "W" and/or "Q" designation is treated as noncompleted semester hours in the calculation of the student's percent of progress standing.
7. **Pass/Fail Grades:** Pass grades are treated as registered semester hours/semester hours earned/no effect on QPA. Fail grades are treated as registered semester hours/zero semester hours earned/with zero QP averaged into the calculation of QPA.
8. **Noncredit Courses:** Noncredit classes, such as those with Continuing Education Units (CEUs), are not used in measuring sufficient progress, since these classes cannot be applied towards degree requirements and no financial aid may be received for enrollment.
9. **Institutional Credits:** Institutional credits are counted as registered semester hours/semester hours completed. The QP for the course is not averaged into the student's overall QPA.
10. **Canceled Semester:** All semester hours for which a grade of "C" or better is earned in that canceled semester are counted as semester hours attempted/semester hours earned.
11. **Fresh Start Program:** Students who are readmitted under the Fresh Start Program will have their progress measured from their first semester of readmission without regard to prior enrollment.

Student Programs and Services

The services and programs listed in this section are the result of collaborative efforts by student affairs professionals and faculty to offer the IUP student a unique and fulfilling undergraduate and graduate student experience. All services, with the exception of the Speech and Hearing Clinic, Parking, Student Rights/Directory Information, Student Technology Services, and Computer Software Policy are under the direction of the Vice President for Student Affairs.

Student Affairs Division Areas

Website: ***www.iup.edu/studentaffairs***

Rhonda H. Luckey, Interim Vice President for Student Affairs

Betsy A. Joseph, Interim Assistant Vice President for Student Affairs

Theodore G. Turner, Assistant to the Vice President for Student Affairs

Advising and Testing: Catherine M. Dugan, Director
Athletics: Frank J. Condino, Director
Career Services: Mark E. Anthony, Director
Counseling Services: Kim Weiner, Department Chair
Financial Aid: TBA, Director
Housing and Residence Life: James R. Froelicher, Interim Director
Learning Center: Carmy G. Carranza, Director
Student Activities and Organizations: Terry Appolonia, Director
Student Cooperative Association: Dennis V. Hulings, Director
Student Development: Sherrill A. Kuckuck, Director
University Health Services: Randi S. Schneider, Director

The Division of Student Affairs offers a variety of services and programs that support the academic mission of Indiana University of Pennsylvania. These services and programs were designed to meet the needs of IUP students as they learn how to become leaders for tomorrow, live together in harmony, make ethical decisions, accept and appreciate diversity, identify and strengthen professional skills, develop good mental and physical health practices, and enhance ways to learn and impart knowledge.

Advising and Testing Center

The Advising and Testing Center provides a variety of services to IUP students and faculty. The center runs the summer orientation program, offers career planning classes and computer-assisted career counseling to undecided majors, co-conducts registration for January freshmen and branch campus students, processes undergraduate total university withdrawals, serves the needs of students with disabilities, and assists in providing advising information to students and advisors.

Services for Students with Disabilities

Disability Support Services (a unit of the Advising and Testing Center) is the primary agent for the provision of access for IUP students with physical, learning, and other disabilities. Faculty and staff within the office serve to ensure IUP's program access compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. Students with disabilities are urged to register with the office. Services provided may include, but are not limited to, early registration; assistance in locating accessible housing; equipment loan; test proctoring and reading; notetaking; recording of books; NCR paper; liaison with faculty, OVR, and BVS; and general advising and counseling. Further information may be obtained in 106 Pratt Hall or by calling 724-357-4067 (V/TD). E-mail questions to *Advising-Testing@grove.iup.edu.*

Athletics

Varsity Sports

The university offers seventeen varsity sports for men and women. It competes at the Division II level of the National Collegiate Athletic Association and is in the Pennsylvania State Athletic Conference.

Men's sports offered in the fall include cross country and football. The winter sports include basketball and swimming. Spring sports are track and field, golf, and baseball.

Women's fall sports are tennis, cross country, soccer, volleyball, and field hockey. In the winter, the sports of basketball and swimming are offered. Spring sports include softball, track and field, and lacrosse.

Intramurals

A well-organized and varied program of intramural sports and athletic activities is conducted for men, women, and on a coeducational basis. Intramural handbooks are available in Room 101, Memorial Field House.

Career Services

Career services are available to students and alumni, and career counseling is provided to students of all class levels as well as to alumni. In addition to career counseling, the primary functions of the office are to arrange for campus interviews, prepare a current file of job opportunities, maintain an extensive library of occupational information, conduct follow-up studies of graduates, and provide general assistance in the career planning and job-seeking process.

The Office of Career Services also receives and makes available to graduates and undergraduates information concerning summer employment.

The university does not guarantee positions, but IUP's record of placement is one of the very best in Pennsylvania.

Career Exploration/Undecided Majors

Students with undecided majors are encouraged to explore options for majors as early as possible while at IUP; to delay doing so may delay graduation. Students desiring to explore majors may take a 1-semester-hour course, ADVT 170 Career Exploration, taught by the Advising and Testing Center, or use the Career Exploration Center (CEC), 108 Pratt Hall. The CEC is open afternoons and early evenings during the week. Appointments may be made by calling 724-357-5701.

Counseling and Student Development Center

Counseling Services

Counseling Services faculty members are psychologists who are assisted by advanced graduate students from the doctoral program in clinical psychology. These professionals facilitate the personal and emotional growth of students by offering confidential counseling and consultation on an individual and small-group basis. Beyond the health services fee, additional fees are not charged for counseling services.

The center provides consultation to faculty, staff, families, and friends of students regarding mental health issues. The center also conducts programs and workshops on a variety of topics, including stress management, eating disorders, grief, and healthy relationships.

Student Development

Student Development provides the following programs supervised by a faculty member and supported by graduate and undergraduate students: summer orientation for parents of incoming freshmen, orientation for entering students immediately prior to the beginning of classes, the Six O'clock Series, and various research projects regarding student opinions and/or satisfaction.

Health Services

The University Health Service operates an outpatient clinic and provides routine health care to students while classes are in session. The outpatient clinic is staffed with physicians, nurse practitioners, nurses, and educators. For emergency care, the local hospital emergency room is available (ER services are not covered by the health service fee). For students who have paid Health Service Fee A ($83), the university will help support the cost of local ambulance service. If the student's health insurance policy does not include coverage of the ambulance service, the student will not be responsible for the cost of the ambulance service.

In addition to primary medical care, including some minor surgical procedures, some laboratory testing, and allergy injections, the University Health Service offers a self-care cold clinic and programs in chemical health, health education, and wellness. With rare exception for inclement weather and during regular hours, the health center has a van to transport students to local medical facilities for scheduled appointments.

Students pay a per-semester mandatory health fee, which varies based upon the student's enrollment status. Refer to the Finances section of this catalog for fees. The health service fee is not an insurance plan. It is highly recommended that students who are not covered under a family insurance plan consider purchasing coverage prior to arriving at IUP.

IUP requires documentation of dates of immunization from new students for the following vaccines: measles, mumps, rubella, tetanus, toxoid-diphtheria, and polio. Individuals born after 1956 should receive a second measles immunization prior to entering college. It has always been important to update diphtheria and tetanus immunizations every ten years. The health center recommends that students living in residence halls also consider immunization for bacterial meningitis. The documentation must be included on the Student Health Form and can take the form of

1. dates of vaccinations by the health care provider who gave them or
2. date of illness with the disease diagnosed by a physician or
3. serum antibody level as determined by a blood test.

Students will receive a copy of the Student Health Form from the Health Service after they receive notification of admission to IUP. The form must be returned to the University Health Service prior to the starting of classes. Students who do not provide documentation for immunization may be prohibited from registering for classes the semester following admission. Please e-mail *health-inquiry@grove.iup.edu* regarding student group health insurance. For this coming year, IUP hopes to have a group health insurance plan to offer students.

Student Health Insurance

The university does not sponsor a group student health insurance plan. Students are encouraged to obtain private insurance to cover the costs of hospital-related expenses. The University Health Service does not bill insurance companies for services. However, students receive a copy of each visit which can be used if the individual chooses to bill his/her insurance company directly.

Housing Information

Residence Life

IUP is a residential campus. Its thirteen residence halls and two apartment buildings are supervised by professional residence directors with backgrounds in student development or counseling or by graduate residence directors enrolled in the Student Affairs in Higher Education graduate program.

It is the policy of IUP to offer full, equal, and nondiscriminatory assistance to all students without regard to their race, color, religion, national origin, gender, ancestry, sexual orientation, or physical ability in both the placement in university housing and the furnishing of facilities and services in relation to that housing.

Specific programs and services offered within the residence halls provide a residential program which supports the academic mission of the university and fosters the development of a community in which the rights and responsibilities of each individual are clearly defined and respected.

Because residence hall living is seen as a positive educational experience, students are encouraged to live on campus unless they are commuting from home. In an effort to make residence hall living more responsive to individual needs, the university offers several living arrangements. Student options include coed or single-sex environments; interest floors related to academic majors; intensive study floors; a community service floor; and chemical-free floors. Students should consider these options carefully and select the one in which they would feel most comfortable.

IUP's two apartment buildings provide single student housing in an apartment-style setting. The university provides cable TV, local telephone service, Ethernet connections to the Internet, stove, refrigerator, kitchen table and chairs, beds, dressers, and living room furniture in each apartment.

Rooms/apartments are available to both undergraduate and graduate students enrolled at IUP. Each year the university reviews its housing policies and revises them according to needs for the following year. The Office of Housing and Residence Life is also responsible for dining service and providing information and services related to off-campus housing. The Office of Housing and Residence Life is located in 308 Pratt Hall, 724-357-2696.

Residence Hall Application

First-year and transfer students will be offered residence hall contracts as soon as they remit the $75 tuition prepayment required to secure a place in the incoming class. The contract should be reviewed carefully and returned with an $80 housing prepayment. Rooms will be assigned as contracts are received. Students will be notified of housing assignments after July 15.

Continuing students may contract for university housing for the following academic year according to the process published and posted in January.

Students being readmitted or returning from student teaching or study abroad programs should contact the Office of Housing and Residence Life for contracts.

Dining Services

IUP offers six meal plans, five of which are available to residence hall students. Refer to the Finance section of this catalog for meal plans and fees.

Residence Hall Association

The Residence Hall Association (RHA) represents all students living in university residence halls. The executive body of RHA is composed of elected representatives from each residence hall. The purpose of RHA is to provide educational, social, and community service programs for residents; to collect information on various aspects of residence hall life; and to assist in formulating housing policies and procedures. All residence hall students are encouraged to participate in RHA. Inquire at your residence hall office for involvement opportunities.

The Learning Center

The Learning Center is committed to helping underprepared students prepare, prepared students advance, and advanced students excel. With this motto as its mission, the Learning center provides various academic support services to all IUP students.

Courses are offered which develop learning skills to enhance academic success. Courses in two levels of pre-college mathematics (LRNC 090, LRNC 095) and two courses in reading (LRNC 070, LRNC 075) are offered for institutional credit. Institutional credit counts in determining full-time enrollment status but not in determining credits applicable for degree eligibility at graduation.

The Learning Center also offers a package of freshman seminar courses designed to prepare first-year students with the skills and knowledge important to college success. These three 1-semester-hour courses count toward graduation and include Educational Planning (LRNC 150), Learning Strategies (LRNC 160), and Career Exploration (LRNC 170).

The Learning Center provides educational support services for all IUP students in the areas of reading, writing, mathematics, biological and physical sciences, foreign languages, social sciences, study skills, and related areas. These services are provided by both professional and undergraduate paraprofessional staff. Students are encouraged to participate in a broad array of program services including one-to-one and group tutorials, workshops, and supplemental instruction (SI) sessions provided by a trained staff of undergraduate paraprofessionals. These services are available in most content areas, as well as in general study skills.

All students matriculating through the Learning Center receive a full program of freshman-year courses and advisement, including assistance in the areas of academic tutoring, career counseling, financial aid information, personal counseling, academic advising related to curriculum concerns, the selection of an appropriate major, and course scheduling.

Act 101 Program

Students identified as eligible for Act 101 support receive the Learning Center freshman program also. The Act 101 Program, created as a result of the Pennsylvania Higher Education Equal Opportunity Act 101 in 1971 by the legislature of the commonwealth, focuses on servicing IUP students in order to make the ideal of "equal educational opportunity" a reality for all qualified students.

The Learning Center office is located in 202 Pratt Hall. Further information about the Learning Center and the Act 101 Program can be obtained by calling 724-357-2729.

New Student Orientation

IUP offers a two-part orientation program for all new students. Freshmen are expected to participate in both of the programs, as they are intended to provide information and programs which are designed to insure a successful first-year experience.

Summer Orientation: The preregistration placement testing, advising, and course selection program occurs during the summer immediately preceding students' matriculation on campus. This experience is designed to assess academic readiness for courses integral to the IUP curriculum, including English, mathematics, and foreign languages. Students admitted to the Indiana campus, Honors College, or the Learning Center program participate in an overnight, two-day experience which includes testing, academic advising, and orientation to university curricular requirements and cocurricular opportunities. Students who are admitted as branch campus freshmen participate in a one-day program. Concurrent parent orientation programs are offered.

Fall Orientation: Fall Orientation occurs as students move onto campus immediately prior to the beginning of fall classes. Programs and activities are designed to assure a smooth transition from the home environment to IUP's campus community.

IUP views this two-part orientation as unique and extremely important to freshman retention and satisfaction with the university. The freshman year is critical in regard to academic success. During this time, students must simultaneously develop academic competence in the college curriculum and adjust to the personal decision-making process college life affords. Each of the programs is designed to assist in this important college adjustment process. Freshmen are expected to participate fully in this two-part program.

Student Activities and Organizations

As participating members of the IUP community, students occupy a responsible role in governing and shaping campus life. Since a valuable part of education lies in participation in groups and activities where experience in leadership, social and community responsibility, intellectual curiosity, and religious interests can be met, active participation in varied organizations is available and encouraged.

There are currently more than 180 recognized student organizations at IUP advised by faculty or staff selected by the students. Students are also encouraged to initiate and support new groups which reflect interests not represented by existing organizations.

Under the supervision of the Office of Student Activities and Organizations and funded for the most part by the Student Cooperative Association, many activities are orchestrated by students and offer entertainment and cultural programs for the entire university community. These activities provide a significant opportunity for students to become more involved with their campus as well as to experience the growth and personal development that involvement provides.

Organizations and activities sponsoring many IUP events include The Entertainment Network (TEN), Artist Series, Black Emphasis Committee, Ideas and Issues Series, Summer Activities, and the University Concert Committee. Participation in these and other groups is strongly encouraged.

African American Cultural Center

The African American Cultural Center is dedicated to the enhancement of multicultural awareness and racial sensitivity. Through educational, cultural, and social activities, the center strives to foster growth, development, awareness, and sensitivity among all members of the university community. The center is staffed by two full-time professionals, graduate students, and work-study students.

Student Community Services

Student Community Services offers IUP students both curriculum-based and volunteer opportunities to explore, expand, and fulfill their altruistic interests. The office works closely with the nearly sixty Indiana County human service agencies to place students in supervised settings.

Student Congress

The Student Congress is the representative and recognized voice of IUP's student body. The Student Congress was created in the spring of 1989 to be a unified voice in a bicameral (two-house) arrangement. It is led by a president and a vice president elected at-large in a spring general election. The primary responsibility of the Student Congress House lies with the student members of various university advisory bodies, including the Student Cooperative Association Finance Committee, which allocates $300,000 in support of university activities. Each member of the Student Congress Senate serves as a representative on the University Senate, the institution's chief governing body. The Student Congress meets biweekly. Every student enrolled at IUP is considered a member of the SC, and input is always sought and welcome.

Student Cooperative Association

The Student Cooperative Association has played an extremely broad role in the cocurricular life of the university for more than sixty years. All students, faculty, and staff who pay the Activity Fee are members of the association. Virtually all campuswide activities outside the instructional program are sponsored wholly or in part by the association.

The Activity Fee is the chief source of income for the association's programs. The student's I-Card will admit him/her free of charge or at a reduced fee to university social, cultural, and athletic events. Other income for the association comes from the profits of the Co-op Store and income from events sponsored by the association.

The Student Cooperative Association operates the Hadley Union Building, which houses the Co-op Store, and the Fitness Center. The Hadley Union Building, built by association members through the Activity Fee, offers many facilities for use by the university community.

The Co-op Recreational Park comprises 270 acres of wooded hillsides and fields. Included are a lodge building which will accommodate groups of up to two hundred people, a ski hut, an eighteen-station exercise course, cross-country skiing and hiking trails, a picnic shelter, an archery range, two softball fields, a golf practice range, outdoor batting cages, and a pond for fishing.

Student Publications

The Penn, IUP's campus newspaper, is published three times a week during the fall and spring semesters by students wishing to gain practical newspaper experience. Interested students are advised to attend organizational meetings held in the beginning of each semester. *The Penn* will carry notices of subscription drives. Applications

for staff positions may be obtained from *The Penn* office.

The Source (the student handbook) is distributed to all students electronically at *www.iup.edu/studentaffairs*. It includes rules and regulations, the extracurricular program, and general information of interest to students.

University Judicial System

IUP is an academic community within the society at large. As a community, the university has developed a code of standards and expectations that are consistent with its purpose as an educational institution. IUP reaffirms the principle of student freedom, coupled with an acceptance of full responsibility for one's behavior and the consequences of such behavior. As a member of the academic community and of the larger society, a student retains the rights, protections, guarantees, and responsibilities that are held by all citizens.

The intent of this educational system is to create behavioral change in the student, promote civility openness and justice, and also protect the rights of the members of the university community. The judicial system of IUP exists to review all alleged violations of university regulations and/or federal, state, and local ordinances. The system will hold the student accountable for his/her actions when IUP regulations or statutes have been violated.

The primary function of the judicial systems is to adjudicate alleged policy violations by students that occur on campus. The university reserves the right to adjudicate violations by students in off-campus locations when those violations might adversely affect the university community. The university maintains the right to amend its rules and to make such amendments effective immediately upon appropriate public notification of students. A complete statement of regulations is available in the student handbook at *www.iup.edu/studentaffairs*.

Veterans Affairs

The Veterans Affairs Office provides many services to veterans, including academic support, tutoring, housing assistance, financial aid, and general information. The Veterans Affairs Office is located in Clark Hall. For information on forms, please call 724-357-3009. The Federal Veterans Office telephone number is 800-827-1000.

The following services are available to IUP students but are not a part of the Division of Student Affairs.

Speech and Hearing Clinic

The Speech and Hearing Clinic, located in Davis Hall, offers both diagnostic evaluations and therapeutic services for speech, language, and hearing problems. The clinic also administers the speech clearance for teacher education programs.

These services are made available without charge to students regularly enrolled at the university to give the necessary assistance to alleviate deficiencies which would interfere with successful performance and progress in the university and in future work. Students are encouraged to use the facilities provided for them and may of their own initiative come to the clinic for help, or they may be referred by any faculty member or university official.

Parking

Students, faculty, and staff members who park vehicles in campus parking areas must register their vehicles with the Campus Police Office. Resident students will be issued parking permits for the following reasons: medical necessity, student teaching, or other academic need for a vehicle. A written application must be submitted to and approved by the Parking Authority Review Board. Parking will be available to resident students not meeting the aforementioned criteria. They may park for a fee in the Robertshaw lot. The Campus Police Office is located in the Administrative Annex basement and can be contacted for information on parking as well as copies of the current rules and regulations. Rules and regulations can also be accessed at the website *www.iup.edu/police*.

Student Rights/Directory Information

The following information is considered directory information under the Family Educational Rights and Privacy Act (the Buckley Amendment of 1974) and may be released without the student's permission: name, address, telephone number, major, student activities, weight and height (athletic teams), dates and status of attendance, dates of graduation, degrees and awards received and where received, most recent educational institution attended, and e-mail username.

Students may request that this information not be publicly released by completing a form available in the Office of the Registrar, Clark Hall Lobby. Upon receipt of this signed form in the Registrar's office, all information will be withheld, even beyond graduation, unless the student requests in writing that this nondisclosure request be rescinded.

Student Technology Services

Student Technology Services (STS) provides proactive and reactive measures to assist students of IUP with orientation to and use of computers and other technology at IUP. One of the goals of STS is to provide students with a place to go for advice and assistance with issues related to computers and other technology on the campuses of IUP.

The Student Computing Help Desk can address student questions concerning e-mail, web pages, NT network usage, etc. Students may contact the help desk via phone (724-357-2198) or e-mail (*Student-HelpDesk@grove.iup.edu*). Our web page at *http://www.iup.edu/ats* includes several sections which might help students to answer their own questions. Students are also welcome to visit the Student Computing Help Desk at Gordon Hall, room 139 for personal assistance with their computing problems. The Student Computing Help Desk is open from 10 a.m. until 6 p.m. weekdays.

Computer Software Policy

It is the policy of IUP that contractually protected and/or copyrighted computer software shall not be improperly copied, distributed, or used by its employees, students, or affiliated organizations. It is the responsibility of each member of the university community to adhere to this policy and to enforce it with regard to those they supervise. If any member of the community has a question regarding the propriety of using software, he/she is responsible for contacting his/her supervisor for direction. The supervisor may in turn refer the questions to the director of Academic Computing of the Technology Services Center for a decision on what constitutes proper use. The full text of the policy adopted by University Senate and Council of Trustees in May, 1988, is available in the computer laboratories, from the TSC, and at *www.iup.edu/academicaffairs*.

University Computing Resources Policy

University resources are limited, and the right to use computing resources in the iup.edu domain does not extend to activities which unfairly deprive other potential users of access to computing resources or which impose an unnecessary burden upon the university. All users have an obligation to use resources responsibly, aware that their use does cost the university, the Commonwealth of Pennsylvania, and its citizens real money to provide.

Computing administration has an obligation to suspend activities which it deems to pose a clear and present threat to the efficient operation of and equitable access to university computing resources. Such suspension should, whenever practical, be accompanied by warning and a clear explanation of the inappropriate activity. The user has the right to appeal the suspension through the faculty, employee, or student judicial processes.

Academic Policies

Note: Please see individual college sections for policies pertaining only to particular colleges and majors.

Classification of Students

In order to be classified as full-time, undergraduate students attending any regular academic year semester must be currently enrolled in at least 12 semester hours.

During the IUP summer session, a student must be enrolled in a total of 12 semester hours during the entire summer in order to be classified as a full-time enrollee.

Full-time classification for students enrolled in instructional periods which do not conform to the regularly scheduled academic sessions will be based upon the number of enrolled semester hours during that period of enrollment (e.g., 1 semester hour in one week of instruction would equal the minimum full-time certification standard).

For purposes of designating students by class, the following credit-hour classification ranges are used:

Freshmen	28 semester hours or less
Sophomores	29-56 semester hours
Juniors	57-90 semester hours
Seniors	91 semester hours or more

Class designations are based on credits earned rather than credits attempted. Persons holding a degree and working for a second baccalaureate degree may be classified as seniors.

Normal Semester Hour Loads

A normal semester hour load is 15-17 semester hours. A student who wishes to schedule 18 or more semester hours must obtain approval from the dean of the college in which he/she is registered; approval will be predicated upon various criteria such as the student's demonstrated competencies, total courses, and specific conditions. If approval is granted, the dean will set the credit limit and make the appropriate computer entry. A student is responsible for paying a per-credit fee at the current tuition rate for each credit beyond eighteen.

Schedule Changes (Drop/Add)

The university registration system, University Records and Scheduling Assistant (URSA) on the Web, is characterized as one of continuous registration. From the student's initial registration time for a given semester through the end of the drop/add period, a few days into the semester (except for specified restricted times), a student may modify his/her schedule to the extent that classes are available or permission to register for a closed or restricted section has been granted and entered into the computer system.

Deadlines for the opportunity to drop or add sections can be found in the academic calendar at the website *www.iup.edu/registrar*. Each student is responsible for making appropriate computer transactions to ensure schedule accuracy. Note particularly that, while the department may enter permission to register for a section, the student must complete the actual registration transaction on URSA.

Advanced Placement and Credit/Exemption Examinations

Courses taken by students prior to college admission under the Advanced Placement Program of the College Entrance Examination Board may be recognized by the award of college credit or by exemption from required subjects. Those who earn a grade of 3, 4, or 5 in the Advanced Placement Examination will be granted credit toward the number of credit hours required for graduation.

For students who have had other unusual opportunities for instruction or have advanced in a given field, an opportunity to gain credit and/or exemption from a course is afforded through examinations. University Testing Services in the Career Services Office (302 Pratt Hall) offers credit options through the College Level Examination Program (CLEP).

Students have an opportunity to gain exemption or credit through successful completion of comprehensive examinations by requesting from

the academic department an exam as a substitute for completing all the usual requirements of the course.

A student who passes an exemption examination will be exempt from taking that course in his/her academic program. When a student receives credit for a course by examination, the credit will be applied to graduation requirements just as though the course had been taken. If a student is granted exemption only from a course, he/she will be permitted to take a free elective in place of that course. This enables the student to specialize further, correct weaknesses outside the major field, build knowledge in an ancillary area, or be introduced to an entirely different area.

Courses for which credit or exemption are awarded by examination will not be used in the determination of grade-point averages.

Internship/Cooperative Education

Students may apply for an internship if they have completed 57 semester hours and have at least a 2.0 GPA. Internship sites are normally located within a 500-mile radius of the campus. Overseas placements are located near an IUP center. Internships are available in state and federal offices; businesses at the local, state, and national level; state-related agencies; corporations; and foundations.

Students may apply for a co-op if they have completed 30 semester hours and have at least a 2.0 GPA. Two experiences are required. Sites are national and international. Placements parallel those of the internship program.

Because internships are viewed as an integral part of the student's academic program, students who are interested in specific internship programs should consult with the internship advisor in the department of their major. A maximum of 12 semester hours is applicable to an undergraduate degree program from any combination of co-op and internship experiences.

Prior Learning/Portfolio Assessment

Prior Learning Assessment Programs

IUP offers several methods for earning university credit for college-level learning gained through work and life experience. Through the Office of Career Services, the College Level Examination Program (CLEP) offers standardized examinations in general and specific subjects. In addition, departmental examinations are also available in specific areas on a limited basis.

Where examinations are not available, portfolio assessment may provide the student with the opportunity to present evidence of learning for evaluation by a university faculty member. Through portfolio assessment, work and life experiences are evaluated to determine their appropriateness and applicability for university credit. Credits earned through prior learning assessment may not be applied toward university residency requirements for awarding of degrees. In addition, no more than one-half of the semester hours required for a student's major may be earned by CLEP, departmental examination, and portfolio assessment. Contact the School of Continuing Education for information regarding portfolio assessment.

Policy on Portfolio Assessment

IUP has authorized a policy for assessment of prior learning that took place outside traditional classrooms in a procedure known as Portfolio Assessment. It is particularly designed for adults with extensive documentable knowledge from work experience, travel, independent study, or other out-of-class experiences.

Portfolio Assessment: Principles

1. Credit awarded through portfolio evaluation must conform to specific course titles listed in this catalog. Credit awards for general broad areas (block credit) will not be permitted.
2. In order to request a portfolio assessment, the student must be currently enrolled at IUP. Credit awarded must be intended for use as part of a degree or certification program.
3. Each department will determine the maximum number of semester hours to be awarded for prior learning for its major. In no case will more than one-half of the major be earned through CLEP, challenge examinations, and other forms of prior learning assessment.
4. Semester hours earned through portfolio assessment may not apply as residency credit for the purpose of awarding degrees.
5. Semester hours earned through portfolio assessment may be awarded only as regular course credit.
6. If a related examination is available through CLEP or if a challenge examination has previously been established for the course, a portfolio assessment of those semester hours will not be accepted.
7. Acceptance of portfolio assessment credits by the department will be indicated by the signature of the chairperson of the department offering the course. The dean of the appropriate IUP college and the dean of the School of Continuing Education must also indicate approval.
8. Students may qualify solely for undergraduate credit—not graduate credit.
9. The title of the course, the semester hours, and the indication that credit was earned through Portfolio Assessment will be recorded on the academic record.

Portfolio Evaluation: Procedures

1. Student meets with the assistant dean for Credit Programs in the School of Continuing Education to determine the feasibility of earning semester hours through portfolio evaluation. Standard outlines of related courses are provided to student.
2. Preliminary Application Form - Student must provide a resume and answer the following questions:
   a. What have you learned that relates to this course?
   b. Where and when have you learned it?
   c. What documentation do you have that supports the claim?
3. A handbook to assist students in compiling a portfolio will be printed. It will show how to relate to the written portfolio learning gained through work experience, independent study, and other experiences. Evidence of learning through documentation of experience, completion of a project, and written examination will be explained. If there is sufficient demand, a workshop will be conducted to assist students.
4. Fees:
   Application Fee per Assessment: $15.00
   Assessment Fee: one-half the current rate of tuition per credit for each credit requested; to be paid when portfolio is submitted for evaluation.
5. The application will be submitted to the assistant dean for Credit Programs. Upon approval, the chairperson of the department offering the course will be requested to suggest the name of a faculty member to the dean of the college for approval.
6. The faculty member will meet with the student to determine the technique of assessment or a combination of techniques to be used, including interviews, documentation, observation of performance, examination, etc.
7. After the portfolio has been prepared by the student, it will be submitted to the dean of the School of Continuing Education for review, then forwarded to the appointed faculty member for assessment.
8. The faculty member will evaluate the portfolio, then make a recommendation for or against the award of credit and the amount of credit in the form of a letter, which must be approved and countersigned by the chairperson of the department offering the course. The portfolio will be forwarded to the dean of the college which oversees the student's curriculum to approve and verify that the course will be accepted as part of the student's program. Finally, the portfolio is sent to the assistant dean of the School of Continuing Education, who will notify the student and the registrar.
9. The registrar will list the course title, credit, and an indication that credit was earned through Portfolio Assessment.

Advisory Program

A group of selected faculty members act as freshman advisors for entering freshmen in their departments. In some curricula the advisors continue with the same group of advisees from year to year. In other curricula the freshman advisors remain with their advisee groups only for the students' first year; under this program, the student is then assigned an academic advisor for the remaining years through to his/her degree in a chosen field.

Faculty advisors counsel the students on academic achievement, dropping courses, changing curriculum, student activities, study schedules, and personal problems.

Change of Major

For students changing majors into the College of Education and Educational Technology or into the Eberly College of Business and Information Technology, special policies apply. Please refer to the individual college sections in this catalog for change of major policies pertaining to specific colleges and majors.

To qualify for change of major, a student must be in academic good standing (2.00 GPA) and must meet any other requirements specific to the major. Criminology majors and all teacher certification programs have requirements beyond a 2.00 GPA.

A student must apply for a change of major in the office of the dean of the college in which the student is registered if the curriculum change desired is from one department to another within the same college (for example, change from a mathematics major to a biology major) or in the office of the dean of the college to which the student wishes to transfer if the curriculum change is from one college to another (for example, secondary education major to biology major). In either case, the student will complete an application form that is available in the dean's office. Before seeking a change of major, it is advisable that the student consult with the departmental chairpersons of both the "old" and "new" majors.

When a student changes colleges, the dean (or dean's agent) of the college into which the transfer is sought will evaluate the student's credits before approving the transfer. A copy of the evaluation will be made available to the student and his/her new advisor if a change of major is effected.

In cases involving students who are veterans, the dean of the college into which transfer is sought (or dean's agent) shall give the veteran a statement of prospective approval and the effective date of the proposed changes. This statement shall also indicate the amount of extended training time the change of major will entail and the amount of credit loss, if any. The veteran shall take this statement to the veteran's counselor at least one month prior to the effective date of the change. No transfer of curriculum shall be made by veterans until V.A. approval has been assured.

Sophomore Screening for Junior Status Approval

General policy at IUP permits each college to determine its own scheme for evaluating the development and progress of its major students. However, each college is expected to employ some effective procedure for such evaluation.

Several of the colleges use a procedure called "Sophomore Screening for Junior Status Approval" with the following required: All students (in such a college) enrolled in their fourth semester or who will complete 57 semester hours attempted by the end of the current semester must apply for Junior Status approval by filling out an application form by the deadline date designated and announced.

All students should check with their faculty advisors to determine which colleges use the "Junior Status" screening procedure and the criteria for Junior Status Approval.

University Policy on Semester Course Syllabi

Each faculty member shall prepare and distribute, without charge, to each student within one week of the first meeting of the class a semester course syllabus. The syllabus will be consistent with course content and catalog description, which was approved by the Curriculum Committee of the University Senate for the initial course offering or revision.

The semester course syllabus is a vehicle of communication to promote student academic planning and to avoid misunderstandings of course plan and requirements.

It is recommended that each syllabus include:

a. the faculty member's name, office location, telephone number, and office hours
b. an outline of the course content, objectives, and prerequisites, as appropriate
c. information about the required textbook(s) with title, author, and edition, and any other required materials
d. information on the determination of grades, including the weight, types, and scheduling of evaluations, other planned requirements, and expectation for class participation
e. statement of policies and/or penalties for make-up exams and late submission of assignments

Undergraduate Course Attendance Policy

The university expects all students to attend class.

Individual faculty members may define attendance standards appropriate to each course and the consequences of not meeting those standards, within the following guidelines:

1. Each policy must be distributed in writing during the first week of the course. Normally, it is expected that the information dealing with class attendance standards will be distributed with the Semester Course Syllabus.
2. Each policy must recognize students' need to miss class because of illness or personal emergency.
3. Each policy must define some limited level of allowable absence, normally at least a number of clock hours equal to course semester hours.

Anticipated Class Absence for University Representation and Participation

The university community recognizes the values of student participation in cocurricular and extracurricular activities of the university. IUP has fostered this participation with an informal policy of good faith accommodation to meet overlapping demands of the curricular and extracurricular commitments.

The underlying spirit of good faith accommodation ultimately is set in the faculty member's unabridged right to determine the terms of variance, if any, from the established course syllabus—tests, quizzes, due dates for papers or other assignments, projects, presentations, and all other course operations.

In seeking variance, the student must take the initiative to make all arrangements including validation of participation as needed. The student should generally assume that papers and such assignments should be completed and submitted before the anticipated class absence. Alternate arrangements for tests, quizzes, labs, or class participation activity (panels, simulations, presentations) should be sought sufficiently in advance to permit faculty/student agreement on the plan for completion, whether the actual completion is rescheduled to be prior to or subsequent to the anticipated absence.

Inclement Weather Policy

Indiana University of Pennsylvania is committed to the safety and security of its students, faculty, staff, and visitors. Because of this commitment, the decision whether the university should close or remain open during periods of adverse weather conditions is based on the overall concern for the university community. In general, however, IUP's practice will be to remain open and to conduct classes and business as usual during periods of inclement weather.

Closure of the University: Should adverse weather conditions arise or be anticipated that would make it inadvisable to operate the university on a given day, the president may, at his discretion, close the institution (i.e., cancel all classes and on-campus activities at all campuses). In the event of either a full- or partial-day closure, notification will be provided to the following radio and television stations: WDAD Radio (Indiana), WCCS Radio (Homer City), WJAC-TV (Johnstown), KDKA-TV and KDKA Radio-1020 AM (Pittsburgh), and WTAE-TV and WTAE Radio-1250 AM (Pittsburgh).

Cancellation of IUP-Sponsored Activities or Events in the Absence of University Closure: Should adverse weather conditions arise or be anticipated that would make it inadvisable to conduct an IUP-sponsored activity or event on a date when the university otherwise remains open, the sponsoring unit/department has the option to cancel or postpone the function. The sponsoring unit/department also assumes responsibility for notifying event participants of the cancellation/postponement in an appropriate and timely manner.

Quality Points and Determining GPA

Grades and Quality Points

In the grading system, the following grades are used in reporting the standing of students at the end of each semester or session:

Grade	Description	Quality Points
A	Excellent	4 quality points/semester hour
B	Good	3 quality points/semester hour
C	Average	2 quality points/semester hour
D	Passing	1 quality point/semester hour
F	Failing	0 quality points/semester hour
P	Passing	0 quality points/semester hour (for credit courses only) (See Pass/Fail policy for more information.)
S	Satisfactory	0 quality points (for zero-credit courses only)
U	Unsatisfactory	0 quality points (for zero-credit courses only)

Other Designations (carrying no quality points):

AUD	Audited course	
EXM	Examination	
FOL	Portfolio Assessment	
I	Incomplete	Student was unable to complete the coursework due to unexpected illness or personal emergency. (See I [Incomplete] Policy for more information.)
L	Late Grade/ Continuing Course	Student work is expected to extend beyond a given semester. (See L [Late Grade, Continuing Course] Policy for more information.)
OL		Other Location
Q	Total Semester Withdrawal	Used when a student has totally and officially withdrawn from the university for a given semester. The "Q" designation is not issued by instructors. (See Total University Withdrawal Policy for more information.)
R		Research in progress (graduate)
TR		Transfer
XMT	Exemption	
W	Withdrawal	Used when a student has elected to withdraw from an individual course but not from all courses. The "W" designation is not issued by instructors. (See Individual Course Withdrawal Policy for more information.)
*		Grade not reported by instructor. No grade information was reported by the end of the normal grading period.

Grades followed by the designations below indicate the application of a policy which has amended the student's cumulative grade-point average.

.	Institutional Credit (credit counts toward enrollment status, but does not count toward graduation or in GPA calculation)
..	Cancelled Semester (see policy explanation)
*	Fresh Start (see policy explanation)

Determining GPA

Cumulative Grade Point Average (CGPA) is determined by multiplying the semester hours for a course by the quality points received for that course. Then, the total number of semester quality points for all courses is divided by the total number of semester hours attempted.

Prior to Fall, 2000, grade-point averages were determined by calculating to 1/1000th rounding to 1/100th (two decimal places). Beginning Fall, 2000, grade-point averages are determined by straight calculation to 1/100th without rounding.

Academic Honors

IUP recognizes academic achievement through Dean's Lists, Provost's Scholars, and graduation honors.

Provost's Scholar

Juniors who have a cumulative GPA of 3.50 and above at the beginning of the fall semester are named Provost's Scholars and are recognized annually.

Dean's List

Undergraduate students receive recognition on the Dean's List for each semester (or summer sessions cumulatively) in which they earn at least a 3.25 GPA based on at least 12 semester hours of graded (not P/F) coursework.

Graduation Honors

Traditional Latin honors are awarded at graduation to first bachelor's degree candidates with appropriate academic records. Calculation is based on all undergraduate credits and quality points earned at IUP. Graduation honors are not granted for second (subsequent) degrees. The distinctions are:

Cum laude—3.25 to 3.49 cumulative GPA
Magna cum laude—3.50 to 3.74 cumulative GPA
Summa cum laude—3.75 to 4.00 cumulative GPA

Beginning December, 1994, non-Latin honors are awarded to associate degree candidates. The distinctions are:

With Honor—3.25 to 3.49 cumulative GPA
With High Honor—3.50 to 3.74 cumulative GPA
With Highest Honor—3.75 to 4.00 cumulative GPA

Grading Policies

Shortly after each semester or session, a grade report will be available to each student at the University Records and Scheduling Assistant (URSA) system at *www.iup.edu/ursa*.

Quality points are not counted on credits from other schools, and a student transferring from another school is held responsible for quality points only on work taken at this university.

Institutional Credits are associated with remedial courses which are numbered below 100. Credits from institutional credit courses do not apply to degree requirements for graduation but are used in determining enrollment status (full or part time), including financial aid and athletic (NCAA) eligibility.

Midterm Grade Report Policy

To help undergraduate students monitor their academic performance, faculty members will provide a warning to students with unsatisfactory performance at midterm. Using the university's accepted grade reporting technology, faculty members will assign a midterm grade of "D" (danger or potential failure) or "F" (failure). Each semester the Registrar will establish and announce the dates for the window within which midterm grades may be posted by faculty members and read by students and advisors. The midterm grade is an advisory grade and is not a permanent part of a student's academic history. It will not be used to determine enrollment status, dismissal, or eligibility for financial aid, housing, or athletics.

Audit Policy

All audited courses will be identified as such on the student's grade report and transcript. Work taken on an audit basis will not be graded and will not count toward the fulfillment of requirements for a degree to be awarded by IUP. Since semester hours attempted and quality points will not be awarded for audited courses, they will not affect the student's grade-point average in any way. Auditors will pay normal tuition and such other fees as may be required for the course.

To audit an undergraduate course, a person must be admitted to the university and have met course prerequisites. Students wishing to audit a course for which they registered should obtain a Course Audit Form from the office of the department offering the course. Students must first register for the course before filing a course audit form. All audit processing, including revocation of previously requested audit classification, must be completed during the regular drop/add period. Copies of the completed form are returned to the Registrar's Office, to the department chairperson, and to the student. Audit students have the same privileges as other students in all coursework. There is no limit on the number of courses which may be audited.

Pass-Fail Policy

The purpose of pass-fail is to permit a student to take an elective course in a field of personal interest where he/she may be competing with major students in the department in which the course is offered. When scheduled, such a course shall be included in the student's normal course load for the semester.

A student may take courses on a pass-fail basis to a total of 15 semester hours throughout his/her university career. The student is limited to one pass-fail course in any given semester during the sophomore, junior, and senior years.

All courses in the student's Liberal Studies program and courses required to meet major and minor requirements are excluded from this prerogative.

The student must declare his/her intent to choose pass-fail in a specific course no later than six weeks after the beginning of the semester or the equivalent timespan in a summer session. Once declared, this pass-fail option may not be revoked. Instructors will not be notified of the identity of pass-fail students in their courses. The grade given by the instructor will be translated to a "P" or "F" during the processing of grades.

A student shall be given academic credit without quality points for a course taken pass-fail upon receiving a passing mark in the course. The semester hours successfully completed under pass-fail ("passed"), within the overall 15-semester-hour limitation, shall be recorded as counting towards the total semester hours earned for graduation but not towards the semester-hours-attempted data used in calculation of the cumulative grade-point average. However, if a student fails a pass-fail course, he/she will receive the "F" grade and the corresponding grade-point average. An "F" earned under the pass-fail option may be repeated only under the graded option to provide the quality points to correspond to the "hours attempted" incurred with the "F."

The summer sessions, collectively or in any combination, shall be considered a unit similar to a spring or fall semester for pass-fail purposes. Hence, a student is permitted to take only one course during the summer on a pass-fail basis.

Exceptions: Currently, there are two courses which are exceptions to the Pass-Fail Course Policy. EDUC 389 and NMDT434 are only offered on a pass-fail basis.

I (Incomplete) Policy

The designation of I is used to record work which, so far as covered, is of passing grade but is incomplete because of personal illness or other unavoidable reasons. Changes of grade to convert designations of I must be received in the Office of the Registrar no later than the last day of regular classes preceding the final exam period in the next regular (fall/spring) semester after the I designation was assigned. The dean of the college in which the course is offered may approve an extension, provided the faculty member concurs. A faculty member assigning an I designation must complete a form indicating the work to be completed, deadlines for completion (it is not necessary to allow the maximum allowable time), and guidelines to establish the final grade. Copies of the completed form will be sent to the department chairperson, to the dean of the college in which the course is taught, and to the student receiving the I designation. To monitor I designations, the registrar shall submit to each faculty member routine semester reports of outstanding I designations.

L (Late Grade, Continuing Course) Policy

The designation of L (Late grade, continuing course) is appropriate for cases in which student work is expected to extend beyond a given semester/session. The designation of L is not to be confused with a designation of I, which is only appropriate for individual students unable to complete their course work because of unexpected illness or personal emergency. L designations are appropriate for:

a. Internships, practicums, field experience courses, workshops, and independent studies that, by design, extend beyond the normal end of the grading period.
b. Others as approved by the department chairperson and the dean of the college in which the course is taught. If a specific course is always eligible for L designations, the dean may grant standing approval for L designations every time the course is offered.

Faculty wanting to use the L option for eligible courses must notify the registrar two weeks prior to the end of classes so that the grades can be pre-entered. L designations which are not precoded may be given only with the permission of the department chairperson and the dean of the college in which the designation is awarded.

Instructors will convert L designations to letter grades at the end of the course. Unless an extension is obtained from the dean of the college in which the course was taught, an L designation unresolved at the end of one year will be converted to an F.

To monitor L designations, the registrar shall submit to each faculty member routine semester reports of all outstanding L designations awarded by that faculty member. The purpose of these reports is to help inform faculty as they help students complete their coursework.

Grade Change Policy

Once earned grades have been recorded, they may be changed only in the case of clerical and/or calculation error or in the event of a successful grade appeal. It is not appropriate to change a grade based upon options, such as supplemental assignments, that are not equally available to all students. The deadline for corrections of clerical and/or calculation errors is the end of the next regular (fall/spring) semester after the grade has been awarded.

Course Repeat Policy

A student may not normally repeat an academic course. Exceptions to this policy are:

1. **Repeatable courses:** Certain courses are eligible for repeat for credit and grade. These courses are advanced art studio courses, music ensembles, special topics courses (281, 481) if the topic is different, and other specifically designated courses.
2. **D and F grades:**
   a. Repeat with replacement: Undergraduate students are permitted to replace the grades and quality points for courses in which they receive a D or F grade by repeating that course at IUP and filing a repeat form with the Registrar's Office. Only six repeat-with-replacement attempts are permitted during a student's entire undergraduate career. In calculating GPA, the new grade and quality points earned will replace the old. However, the transcript continues to document all academic work, and repeated courses are not deleted from the visual record.
   b. Repeat with averaging: In addition to the six repeat-with-replacement options, undergraduate students my repeat other courses in which they receive a D or F grade. In these other repeat attempts, the new grade is averaged with, instead of replacing, the prior D or F grade; the credit for the D repeat counts only once. The transcript continues to indicate all repeated courses.
   c. Course transfers: Students seeking to replace or average D and F grades must repeat these courses at IUP. If an IUP course in which a student received an F is repeated at another institution, the credit will transfer to IUP, but the original F will continue to count toward the IUP GPA. If an IUP course in which a student received a D is repeated at another university, neither the grade nor the credit will transfer.
3. **Other grades:** Courses in which students earned a grade of A, B, C, or P may be repeated only on an audit basis. New grades will not be assigned and additional credit will not be awarded.

This policy also applies to transfer credit. Students receiving transfer credit for an IUP course may not repeat that course at IUP. Similarly, students who have already earned a passing grade in an IUP course may not subsequently receive transfer credit for that same course.

Cancelled Semester Policy

The Cancelled Semester Policy permits students returning after significant separation from the university to delete from the Cumulative Grade-Point Average (CGPA) calculation the results of one particularly unfortunate semester. A student who has not been enrolled in four consecutive semesters and the intervening summer sessions may apply upon application for readmission or within one year of readmission for the application of this policy to any single semester completed before readmission. While readmission may be based on the application for cancelled semester, the transcript record will reflect this only after the student is enrolled and attending. (For cancellation purposes, a semester is defined as any semester of enrollment, whether full or part time, with sessions in a single summer together constituting one semester.) All grades—passing, failing, withdrawals—in that semester must be cancelled from the CGPA. There is no abridgment of the transcript; the courses and grades remain visible on the official transcript. Credit toward graduation remains for those credits associated with passing grades. A student may never cancel more than one semester from his/her CGPA under this policy.

Fresh Start Policy

A student who has been academically dismissed and separated from the university for a minimum of five consecutive calendar years may apply for readmission. Having reviewed the prior and intervening factors for evidence of potential for improved academic success, the college dean or designee may

readmit the student. This policy applies to a student's first baccalaureate degree, and a student may be readmitted under this policy only once. A minimum of 30 semester hours must be completed at IUP after a student returns to IUP under this policy.

A student who wishes to enter a major in a college other than the one from which he/she was dismissed will apply to the original college, which will forward the application and related records to the new college for action.

Conditions for a Fresh Start Record: All semester hours and grades for IUP coursework taken prior to readmission under this policy shall remain on the transcript. Upon readmission, a new cumulative (GPA) is established based upon semester hours and grades earned from the date of readmission.

Prior Record: Previously accepted transfer credits and IUP courses in which grades of C or better were earned prior to readmission will be reviewed in terms of appropriateness (applicability, timeliness) to the new degree. Those courses approved by the college dean or designee will be counted as semester hours earned and applied toward graduation in the manner of transfer credits.

Academic Standards: A student who is readmitted under the provisions of this policy shall be required to meet current degree requirements. He/she shall be academically reviewed under the policies published in the academic catalog at the time of rematriculation. A student readmitted under this policy waives the right to exercise the cancelled semester policy.

Withdrawal Policies

Individual Course Withdrawal Policy

(effective Summer, 2001)

Individual course withdrawals may be processed online only during the first two-thirds of the academic term; in the summer term, individual course withdrawals may only take place during the first two-thirds of the part of summer term in which the course is offered. Instructors are required to inform students of their standing in class prior to this time. Students may begin using the computer registration system to complete an individual course withdrawal after the official drop/add period has closed. After the two-thirds point for each semester or part of summer term, students may no longer process individual course withdrawals online. A student wishing to withdraw from a course after the deadline may request a waiver through the office of the dean of his/her college. Approval is contingent upon documentation of exceptional events of a catastrophic nature that could not have been anticipated.

Caution: Students should discuss course withdrawal with the instructor to assess alternatives. Students should also understand the significant impact of course withdrawal on financial aid eligibility (percent of completion and eligibility to move to next class level). Students are also cautioned to consider the detrimental impact of a series of Ws in a transcript review by a prospective employer or graduate school.

Total University Withdrawal Policy

An undergraduate student who does not register for the succeeding semester or, having registered, does not appear for classes at the beginning of the succeeding semester, is considered to have withdrawn from the university. Thereafter, he/she must apply for readmission as prescribed under the "Admissions and Registration" section of this catalog.

Any undergraduate student voluntarily withdrawing from the university during a semester or a summer session must secure a Total University Withdrawal Form from the Advising and Testing Center, 106 Pratt Hall, 724-357-4067. The student will clear the form with the appropriate offices listed on the form, securing their signatures as evidence of clearance. The signed form will then be returned to the Advising and Testing Center, which will notify the appropriate college dean, campus agencies, and instructors that an official withdrawal has been processed. No person shall be considered withdrawn from the university within a semester or session unless such notice is received. A withdrawal designation will be assigned to all registered courses in the semester/session from which the student is withdrawing.

Any undergraduate student involuntarily withdrawing from the university as a result of suspension or expulsion will have the designation of Q assigned to each registered course as a result of such judicial action.

Other Policies

Academic Standards Policy

A. **Purpose:** The university establishes minimum standards for cumulative grade point average (CGPA) to encourage academic accomplishment and timely progress toward graduation.
This policy applies to all undergraduate students. Designated subpopulations are subject to modifications listed in Section E.

B. **Definitions**
   1. *Academic Good Standing:* Students maintaining a CGPA of at least 2.00 are in Academic Good Standing.
   2. *Probation:* Students whose CGPA falls below the 2.00 standard are on probation during the next Fall or Spring semester for which they are registered.
   3. *Extended Probation:* Students who have been authorized to continue, even though they have not achieved a 2.00 CGPA after one semester of probation, are on extended probation.
   4. *Academic Recovery Plan:* Students whose CGPA falls below the 2.00 standard must develop an Academic Recovery Plan for achieving academic good standing.

C. **Administrative Review and Enforcement of Standards**
   1. Each college, branch campus, and the Learning Center will designate an Academic Standards Officer who will be responsible for academic review and enforcement of standards.
   2. An academic review is conducted at the end of each Fall and Spring semester.
      a. Students earning a 0.00 CGPA at the end of their first semester of full-time enrollment will be dismissed from the university.
      b. Other students falling below the 2.00 CGPA standard will be continued on probation for one semester and be required to develop and implement an Academic Recovery Plan.
      c. Students still below the 2.00 CGPA standard after a semester of probation are subject to dismissal. The Academic Standards Officer may grant one semester of extended probation to those who (1) made progress toward academic good standing while on probation or followed their approved Academic Recovery Plan, and (2) have a reasonable mathematical chance of reaching a 2.0 CGPA after one additional semester. Other probation students will be dismissed.
      d. Students still below the 2.00 CGPA standard after a semester of extended probation will be dismissed.
      e. Students who regain academic good standing but again fall below the 2.00 standard in a subsequent semester are awarded another semester of probation and, where appropriate, extended probation.

D. **Academic Recovery Plan:** Students not meeting the 2.00 CGPA standard must design and implement a comprehensive plan leading to academic good standing. The plan must be developed with and approved by the appropriate Academic Standards Officer.
   1. **Analysis:** Students must identify the factors causing their unsatisfactory achievement.
   2. **Planning:** Plans must include a schedule of minimum grades needed to achieve academic good standing.
   3. **Commitment:** Students must commit to the changes in behavior necessary to achieve academic success. This might include changes in time management, career exploration and the use of such support services as academic advisors, tutoring, the Writing Center, the Counseling Center, the Learning Center, workshops on study skills and related activities, and any other opportunities deemed important by the Academic Standards Officer.
   4. **Documentation:** Each plan must include a satisfactory method of documentation. Records of attendance at classes and support services, journaling of activities supporting academic success, and conferences are potential vehicles to be considered.

E. **Dismissal and Readmission**
   1. Students dismissed under this policy may not be readmitted for at least one calendar year.
   2. Dismissed students are not eligible for enrollment in any session (including summer sessions) for at least one calendar year. After one calendar year dismissed students may enroll in summer courses, but they are cautioned against enrolling without consulting their Academic Standards Officer.

3. Dismissed students may, after one calendar year, apply for readmission through the Office of the Registrar.
   a. Those students who, in the opinion of the appropriate Academic Standards Officer, are likely to achieve academic success may be readmitted.
   b. Decisions for readmission are the responsibility of the Academic Standards Officer of the college the student wishes to enter. If the student seeks admission to a new college, the Academic Standards Officer of the admitting college must consult with the Academic Standards Officer of the college which dismissed the student. Dismissed students seeking admission to a new major must include an application for a change of major.
4. Students may be readmitted only once under this policy. Subsequent readmission may be available under the Cancelled Semester Policy after two or more years of separation or the Fresh Start Policy after five or more years of separation.

F. **Special Populations**
   1. *Learning Center/Act 101 Program*
   Students admitted through the Learning Center remain under the direction of the Learning Center until reaching the 2.00 CGPA standard. Students dismissed after earning a 0.00 CGPA in their initial Learning Center/Act 101 summer program may apply for readmission only to the next Learning Center/Act 101 summer program.
   2. *Branch Campuses*
   Students admitted through a branch campus must remain at that branch until reaching the 2.00 CGPA standard.
   3. *Part-time Students: Continuing Education and Others*
   This policy will be applied on a pro-rata basis for part-time students. Students are considered to be part-time if, at the close of the drop-add period of the given semester, they are enrolled in fewer than 12 semester hours of classes.

IUP Student Grade Appeal Policy

Grade Review Policy

If a student disagrees with the evaluation of his/her work by the instructor but has no basis for a charge of "discrimination" or "capricious evaluation" or "error," the student should discuss the matter directly with the instructor, and if unsatisfied, with the department chairperson, and if still unsatisfied, with the dean of the college in which the course was offered. In such cases, the decision of the instructor shall be final.

If a student believes that an improper grade has been assigned, an appeal may be filed on the following grounds:

1. **Discrimination:** On the basis of race, religion, national origin, sex, age, ancestry, handicapped status, affectional or lifestyle preference, or political affiliation.
2. **Capricious Evaluation:** Significant and unwarranted deviation from grading procedures and course outlines set at the beginning of the course (ordinarily in a written statement during the first week of the course) or grade assigned arbitrarily on the basis of whim or impulse. The student may not claim capriciousness if he or she disagrees with the subjective professional evaluation of the instructor.
3. **Error:** Demonstrable, objective determination that a mathematical or clerical error resulted in the entry of an incorrect grade.

Procedures of Appeal

Level I: Informal Resolution

Every effort should be made to resolve the disagreement at Level I. The student must first seek a resolution to the disagreement with the instructor either in person or in writing. If the student is not satisfied with the results, the student must then speak with the chairperson of the department that offers the course. If still unsatisfied, the student must discuss the matter with the dean of the college in which the course is offered. A Student Congress member may accompany and advise the student during the Level I procedures. Only after all attempts for resolution at Level I have been exhausted may the student initiate Level II.

Level II: Appeal Screening

A. **Composition:** Each year there shall be appointed a Grade Appeals Committee to determine the existence of the substantive basis for appeal. The committee will be composed of seven voting members: three faculty members appointed by APSCUF, three members elected by and from the Senate Academic Committee (one faculty, one administrator, one student), and one student appointed by the Student Congress. A quorum consists of a majority of the committee. To take action, a majority of those present must be faculty members. If a quorum of the Level II committee is not available to meet within the designated time limits, the Provost's Office will seek additional members from the appointing bodies. If these bodies are unable to respond in a timely manner, the Provost's Office may select additional members from the appropriate groups.

B. **Procedure to Initiate Appeal:** To initiate Level II of the appeal, the student must file an appeal form with the Provost's Office. This form must be filed within sixty (60) calendar days of the beginning of the semester immediately following the semester in which the grade was received. The Provost's Office may extend the sixty-day limit only in unusual circumstances when equity demands it and when the student's own procrastination or misunderstanding did not substantially contribute to the delay. (Note: Grade appeals will not generally be processed during the summer. Therefore, the appeal of any grade received in the spring or summer sessions normally will be processed in the fall. A review will be scheduled in the summer only when the student's academic eligibility is jeopardized by the grade in question or when the student is a graduating senior.) The Provost's Office will notify the appropriate dean, department chairperson, faculty member, and the Student Congress president of the student's initiation of the Level II process.

C. **Procedure to Process Appeal:** The student will be expected to submit written documentation of his/her complaint, and the faculty member will be expected to submit in writing the course grading procedure and any other pertinent information. Appeals based on discrimination will be reviewed according to current standards of nondiscriminatory action. Appeals based on capriciousness will be reviewed in light of the faculty member's announced evaluation and grading system. The committee will review the materials to deny or confirm appeal continuance. Denial of appeal continuance must be by a negative vote of four members of the committee. This committee will inform the Provost's Office of its findings. Within five (5) class days of the receipt of the committee's report, the provost or designee will notify the student and the faculty member of the findings. If the basis for appeal is determined to be substantive, the provost or designee will schedule a Grade Review Panel within fifteen (15) class days to be convened prior to the conclusion of the semester.

Level III: Appeal Review

A. **Composition:** The Grade Review Panel will consist of five voting members: one academic dean or associate dean and four faculty members. The Student Congress Executive Committee designee may advise as requested by the student. The affirmative action officer will advise in appeals based on discrimination. The panel will be constituted from the Grade Review Pool by random selection. The panel chairperson will be elected by and from the panel before each review.

B. **Membership:** The Grade Review Pool will be established in the spring term to serve for the following academic year. Using random selection methods, the pool and rotational order within the pool will be established by the Provost's Office. A pool of three deans or associate deans and twelve full-time faculty members will be maintained. In establishing the membership for each review panel, prior to each review the names of those designated as primary members of the specific panel and available as alternates will be supplied to all parties involved. A panel member may request (to the provost or designee) disqualification due to a conflict of interest. The student and the faculty member may eliminate names in proportion to the composition of the panel. Each may eliminate only one dean/associate dean and four faculty. The instructor and the student will be supplied a list of all primary and secondary pool members. The opportunity to disqualify panel members will take place only once. Resulting vacancies will be filled from the appropriate pool of alternates so that the panel will be composed of one dean/associate dean and four faculty. If through self-disqualification and challenges a panel cannot be constituted from the pool, then the Office of the Provost will supplement the pool using appropriate random selection methods.

C. **Procedure:**
   1. Both the student and the instructor will have the right to appear before the panel, present witnesses, and offer evidence. In addition to those specified in Level III, Section A, each may also bring one observer, with whom he or she may consult but who may not participate in the review.

2. The panel shall determine its rules of order for internal operation. After hearing the evidence brought forth, the panel will privately deliberate and render a decision. If the grade appeal is upheld, the panel will constitute a committee of three appropriate faculty members (knowledgeable in the discipline but excluding the faculty member against whom the complaint was lodged), who will review the student's work and recommend the appropriate grade or suitable remedy. The panel will incorporate this information in its determination, which it then forwards to the Provost's Office for implementation, ordinarily within thirty days. The Provost's Office will initiate the processing of grade changes resulting from Level III decisions.
3. The written report sent to the Provost's Office will state whether the student's appeal is upheld or denied; if upheld, the committee's evaluation and remedy will be included. Both the student and the faculty member have the right to review all documents related to the appeal. All documents supporting the report will be sealed and kept only as long as necessary (normally one year) to ensure the appropriate action is taken before they are destroyed or returned to the individual presenting the evidence.

Ancillary Provisions

A. **Continuing Rights:** This appeal does not supplant any legal rights afforded by the Commonwealth of Pennsylvania and/or the Government of the United States. Nothing in this policy abrogates or modifies any provisions of or rights under the Collective Bargaining Agreement.
B. **Discrimination in this policy generally means unlawful discrimination.** To the extent that any form of discrimination identified in this definition is not unlawful discrimination, this definition shall not be taken to create a cause of appeal against the university. In such cases, the final appeal procedures stated in this policy will be final and binding on the student.
C. **Tenure and Promotion Committee Membership on Grade Appeals Committees:** Members of the universitywide tenure and promotion committees may not serve concurrently on grade appeals committees.
D. **Support Mechanism:** The Provost's Office, after consultation with the Senate Academic Committee and APSCUF, will be responsible for identifying a pool of at least ten faculty members well versed in the preparation of grade appeals who will be available upon request to help students or faculty prepare documentation for the grade appeals process.
E. **Training/Support:** The Provost's Office will offer yearly information sessions/workshops to assist deans, chairs, grade appeals panel/committee members, and members of Student Congress/Academic Affairs Committee in identifying issues and to provide guidance for the resolution of grade appeals.
F. **Dissemination of Grade Appeal Information:** The Provost's Office will annually report to the university community a statistical summary of grade appeal data that does not compromise confidentiality including 1) the number of appeals filed, 2) the resolutions at levels II and III, and 3) the final implementation of Level III decisions.
G. **Appeals on Procedural Grounds:** Decisions may not be challenged merely because the Provost's Office fails to comply with Ancillary Provisions D, E, or F above.
H. **Intentional Misrepresentation:** Intentional misrepresentation in the filing of grade appeals by students will be referred to the university judicial system for students. Intentional misrepresentation by faculty in the grade appeals process will be referred to the Provost's Office.
I. **Confidentiality:** Students, faculty, administrators, and staff involved in processing and hearing grade appeals must respect the confidentiality of all aspects of these proceedings. Those breaching confidentiality subject themselves to possible disciplinary action. This shall not abridge the First Amendment rights of the student appellant nor the instructor against whom the appeal has been filed.
J. **Intended Purpose:** The grade appeal procedures are designed simply as a means to resolve differences between students and faculty related to grading. Unless there is intentional misrepresentation, the results of a grade appeal may not be used for disciplinary action of personnel.
K. **Faculty Compensation:** If a Review Panel (hearing) is scheduled at a time in the summer when any faculty member involved is not under contract, the faculty member will be compensated under terms mutually agreed upon at Meet-and-Discuss.
L. **Review of Policy:** Every five years the Senate Academic Committee will review, in consultation with the campus community, the operation of the Grade Appeals Policy and recommend changes deemed appropriate.
M. *** Amendment:** Amendments may be implemented upon concurrence by University Senate, APSCUF Representative Council, and Meet-and-Discuss.

***Note:** In the amendment process above, specification of University Senate implies the Council of Trustees' role in approving Senate actions and recognizes the Council of Trustees' final action to change policy.

Academic Integrity Policy and Procedures

IUP is an academic community within the society at large. All members within this community are expected to accept the responsibility for academic integrity and honesty. Academic dishonesty seriously erodes the quality of educational pursuits and is unacceptable at IUP. The following policies and procedures have been established to preserve the academic integrity of the university community, while also providing a process that protects the rights of students who allegedly violate these policies.

Policy

A. **Types of Violations.** Violations of academic integrity include, but are not limited to, the following:
   1. Providing or receiving unauthorized assistance in coursework, with lab work, theses, dissertations, or during examinations (including qualifying and comprehensive exams) or quizzes.
   2. Using unauthorized materials or devices, such as crib notes, during examinations or quizzes.
   3. Plagiarizing papers, theses, dissertations, essays, reports, speeches and oral presentations, take-home examinations, computer projects, or other academic exercises by misrepresenting or passing off the ideas, words, formulas, or data of another as one's own. Plagiarism is dishonest and illegal. Writers are indebted to authors from whom they borrow exact words, ideas, theories, opinions, statistics, illustrative material, or facts (beyond common knowledge). Writers are also indebted *if they summarize or paraphrase in their own words* material from sources. All quoted material requires the acknowledgement of the source by the use of quotation marks or indentation (if exact wording is incorporated). In addition, both directly quoted and summarized material must be acknowledged by use of a note or parenthetical citation that indicates the author and/or date of publication and page number or numbers. If the writer indents a quotation, it must be clearly set off from the body of the text and must be documented in the aforesaid manner. To verify the various documentation procedures, writers should consult the style sheet in the particular discipline for which they are preparing the assignment (MLA, APA, Chicago, BC, etc.).
   4. Using the same paper or work more than once without authorization of the faculty member(s) to whom the work is being submitted.
   5. Possessing course examination materials before the administration of the exam, without the prior knowledge or consent of the instructor.
   6. Intentionally evading IUP academic policies and procedures; for example, improperly processing course withdrawals, grade changes, or other academic procedures.
   7. Falsifying information, including falsification/fabrication of research data and/or statistical analyses, forging signatures on various forms and documents, or altering or adding answers on academic exercises or exams after work has been graded.
   8. Computer dishonesty, including: tampering with or making unauthorized change to another person's or the university's computer system, illegally copying computer software, personal use of another individual's computer account, unauthorized activity involving another individual's personal computer system or any system belonging to the university, and other unauthorized use or violations involving computer use.
   9. Noncompliance: failure to follow through with sanction(s) imposed as a result of an academic violation.

The university reserves the right to discipline any student for any action that an ordinary, reasonable, intelligent college student knows or should know might lead to the issuance of discipline. This means the university maintains the right to issue discipline for reasonable cause.

Charges of academic integrity violations may be brought by faculty members or administrators. Students who observe or become aware of a violation of academic integrity by another student are strongly encouraged to report it to a university official. A faculty member/administrator who believes that a student has violated an academic policy may elect to resolve the matter by

Informal Resolution, by Documented Agreement, or by Formal Adjudication. *Sanction(s) may not be imposed upon a student believed to have violated an academic policy without following one of these three procedures.*

If charges are brought, the accused student(s) shall have a fair and reasonable opportunity to answer, explain, and defend against the charges. The university shall have the burden of proof in all cases. Hearsay should not be used as the sole evidence to establish any fact necessary to establish guilt or innocence.

Procedures

A. Faculty/administrators must use one of the following options to resolve alleged violations of academic integrity.

1. **Option I: Informal Resolution.** The faculty member/administrator and student may meet informally, normally within seven class days of the observation or discovery of the incident, and agree to resolve the issue without submitting any formal documentation. If the violation pertains to work being judged by a committee (examples might include dissertations and comprehensive examinations, both oral and written), the meeting must involve a majority of the committee and the resolution must be agreed to by a majority of the committee. It is in the interest of both the faculty member/administrator and student to complete a statement that summarizes the incident, conference, and agreed-upon resolution. This factual statement should be signed by both parties and copies provided to the student and the faculty member/administrator. If agreement cannot be reached, or at the discretion of the faculty member/administrator, a more formal process as outlined in this policy may be initiated.
2. **Option II: Resolution by Documented Agreement**
   a. The faculty member/administrator may schedule a conference with the student in an attempt to agree on the facts of the case and to reach a mutually agreeable resolution. This meeting must normally be scheduled/requested within seven class days of the observation or discovery of the alleged violation or of the failure of resolution by Option I. If an agreement is reached, the faculty member/administrator must complete a Documented Agreement Form outlining the agreement and have it signed by both parties: faculty member/administrator and student. If the violation pertains to work such as a thesis or comprehensive examination being judged by a committee, the meeting must involve a majority of the committee and the Documented Agreement Form must be agreed to and signed by a majority of the committee. Copies are distributed to the student, the faculty member(s)/administrator filing the agreement, and the department chair, who must also electronically record the information for subsequent entry into the computer database. The form must normally be filed within seven class days of the conference.
   b. If an agreement is reached and the form is filed, the matter is closed unless the student has a prior academic violation(s) on record. By signing off on the agreement, the student waives the right to appeal the sanctions agreed upon in the conference. If the student fails to fulfill the written agreement, the faculty member/administrator may file an academic integrity referral against the student for noncompliance.
   c. If a prior academic integrity violation(s) for the student is on record, the matter will be referred to an Academic Integrity Board (AIB). The AIB will review the case to determine if more severe sanctions are warranted (see Section D, Multiple Violations).
   d. If a documented agreement is not reached, the faculty member/administrator should initiate the formal adjudication process by filing an academic integrity referral form with the department chair, normally within seven class days of the conference with the student.
3. **Option III: Resolution by Formal Adjudication.** A faculty member/administrator should pursue formal adjudication if:
   —he/she cannot reach or chooses not to attempt a mutually agreeable resolution with the student regarding the facts of the case or sanctions to be imposed,
   he/she believes that the violation is so severe that it warrants a sanction of expulsion, suspension, involuntary withdrawal from part of IUP's academic or other programs, or awarding a failing grade on a project or examination (such as a graduate qualifying or comprehensive examination or dissertation) when resubmitting the project or retaking the examination is not possible.
   a. The faculty member/administrator should file an academic integrity referral form with the department chair, normally within seven class days of the observation or discovery of the violation or within seven class days of the failure to reach a resolution through Option I or Option II. If the violation pertains to work being judged by a committee, the form must be signed by a majority of the committee. The form will contain a description of the alleged violation, including the time, date, and place of occurrence, and the recommended sanction(s) if the student is found to have violated this policy.
   b. The department chair will forward a copy of the academic integrity referral to the student, normally within seven class days of receiving notification of the allegation, and contact the student to schedule a hearing to review the facts surrounding the allegation and recommended sanctions if the student is determined to have committed a violation.
   c. The hearing should be scheduled so as to allow the student a reasonable time to prepare a defense (normally within seven class days of being notified of the allegation by the department chair).
   d. This hearing will involve the student, the department chair, and the faculty member/administrator(s); the department chair may invite others with pertinent information. All parties must be given the opportunity to submit written, physical, and testimonial evidence, and for reasonable questioning of witnesses.
   e. The accused student may identify an advisor, who may be an attorney, to be present at the hearing. The advisor may only consult privately with the student unless otherwise determined by the university regarding a particular case.
   f. The student may waive his/her right to a hearing in writing. If so, the sanction recommended by the person filing the referral will be imposed. If the student fails to appear when a hearing has been scheduled, the hearing will be held in the student's absence and the department chair will render a decision based upon factual information presented by the faculty member/administrator.
   g. Following the hearing, the department chair will render a determination based on the information presented at the hearing. Normally within seven class days of the hearing, the department chair will forward a written report summarizing the hearing that includes the outcome, the factual basis for the determinations reached, the sanction(s) to be issued, and appeal procedures. Copies of this report will be sent to the student, the faculty member/administrator, and the provost/designee. The department chair will retain a copy for departmental files and electronically record the information for subsequent entry into the computer database.
   h. In the event that a department chair cannot or will not fulfill the above role, or in the event that the person filing the referral is an administrator or department chair, the provost or designee will determine the appropriate individual to fulfill the department chair's role and inform the student and the faculty member/administrator filing charges.
   i. If a prior academic violation(s) for the student is on record, the case must be referred to the Academic Integrity Board which will consider more severe sanctions (see Section D, Multiple Violations). Otherwise, if there is no appeal, the recommended sanction will be imposed.

B. **Academic Integrity Board (AIB).** The AIB will hear all cases in which appeals to the chair's decision are accepted by the provost/designee (see Appeals section C.1. and C.2.). The AIB will also review sanctions in cases of multiple violations (see Section D).

1. The AIB will be made up of four faculty members, one of whom will chair the board, and two students. A quorum requires the presence of four persons, at least one of whom must be a student. All members, including the chair, are voting members.
2. When an AIB hearing is called for, the AIB will be convened by the provost/designee (currently the assistant to the vice president for Student Affairs). The accused student shall be notified of the time, date, and place of the hearing and the names of those AIB members scheduled to review his/her case. If the hearing is an appeal, this notification will also include details of the charges, including the time, date, and place of the alleged offense(s) and the recommended sanction(s). If the hearing is a review of sanctions in a multiple

violation case (see Section D), the notification should also indicate that more severe sanctions might be imposed. The hearing should be scheduled so as to allow the student reasonable time to prepare a defense.

3. Prior to the hearing a student appearing before an AIB may, with good cause, challenge any member on the board sitting in judgment of his/her particular case. When such a challenge is made, an alternate member will be appointed to the AIB.
4. The AIB will review all material and hear all evidence pertinent to the case from the accused and all witnesses. Members of the AIB shall be free to ask relevant questions to clarify information or resulting issues.
5. The student shall have a fair and reasonable opportunity to answer, explain, and defend against information and witnesses presented at the hearing, to submit written, physical, and testimonial evidence, and to call relevant witnesses on his/her behalf.
6. The accused student may identify an advisor, who may be an attorney, to be present at the hearing. The advisor may only consult privately with the student unless otherwise determined by the university regarding a particular case.
7. After hearing all evidence, the AIB will privately make its decision based reasonably upon the evidence presented. A majority vote of the AIB shall be required for any decision. If the AIB finds the student to have committed the misconduct or infraction, and the student has no prior academic violation(s) on record, it may accept, reduce (but not increase), or modify the recommended sanction. If the student does have a prior academic violation(s) on record, the AIB may increase the recommended sanction (see Section D, Multiple Violations).
8. If the student waives his/her right to a hearing in writing, or chooses not to appear at the AIB hearing, the case will be adjudicated based upon the evidence presented at the scheduled hearing.
9. All hearings are closed unless the student requests an open hearing in writing. The AIB chair has the authority to make the final decision regarding access of spectators at the hearing.
10. The AIB must submit a written report of the decision, normally within seven class days of its decision, to the student, faculty member/administrator, department chair, and provost/designee, who will electronically record the information for subsequent entry into the computer database.

C. **Appeals.** These appeal procedures apply to cases resolved through formal adjudication. Cases of academic integrity that are resolved through informal resolution or documented agreement cannot be appealed, as the facts of the case, the decision, and sanction(s) have been agreed to by the student and the individual making the charge.

1. If, after receiving the department chair's report on the outcome of the hearing, the faculty/administrator or the student disagrees with either the decision, the sanction, or both, he/she may appeal to the provost/designee, normally within seven class days of receiving the report. This appeal must be in writing and must describe in detail the grounds for the appeal. These reasons may include the following:
   a. Denial of a fair and reasonable hearing
   b. New evidence (applies when there is an acceptable reason why the information was not presented at the original hearing)
   c. Excessively harsh sanctions. Students cannot appeal on the basis of excessively harsh sanctions if the sanctions are specified on the course syllabus, have the prior approval of the department, and apply only to the specific course in which the alleged violation occurred.
2. The provost/designee may deny the appeal or direct the appeal to be heard by an AIB within seven class days. All appeals involving sanctions of involuntary withdrawal from part of IUP's academic or other programs, suspension, or expulsion will be heard by an AIB.
3. Unless the recommended sanction is suspension or expulsion, the decision of the AIB is final and will be implemented by the provost/designee, who will electronically record the information for subsequent entry into the computer database.
4. Suspension or expulsion may be recommended by the AIB but can only be implemented by the vice president for Student Affairs (the president's designee for suspension and expulsion), who is responsible for verifying that due process was followed.

D. **Multiple Violations**

1. Students with multiple academic violations of record will be subject to additional sanctions, including possible suspension or expulsion from the university.
2. Information about prior violations is not relevant to determining whether a student has violated this policy. However, such information is pertinent in determining the appropriate sanction.
3. If a student found in violation of this policy through either Resolution by Documented Agreement or Resolution by Formal Adjudication has a prior academic integrity violation of record, the case will be referred to an AIB.
4. For cases previously resolved by Documented Agreement or through Formal Adjudication at the department chair's level, the AIB will schedule a new hearing. This hearing will review all information pertinent to the determination of an appropriate sanction but will not reconsider the issue of whether the policy violation occurred. After considering the severity of the current and prior violations, the AIB may determine that a more severe sanction is appropriate.
5. For cases being heard by an AIB, the AIB should request information on prior violations only after determining that a violation has occurred. Information on prior violations should be used in determining the appropriate sanction.
6. The AIB must submit a written report of the decision, normally within seven class days of its decision, to the student, faculty/administrator, department chair, and provost/designee who will electronically record the information for subsequent entry into the computer database.
7. The student may appeal any new sanction(s) to the provost/designee. The provost/designee may deny the appeal or, on the basis of denial of a fair and reasonable hearing, new evidence, or excessively harsh sanctions, direct the appeal to be heard by a second AIB. The provost/designee will electronically record the information for subsequent entry into the computer database.

E. **Sanctions**

1. The following sanctions may be agreed upon by the student and faculty member/administrator through informal resolution or documented agreement. All grade reductions require the approval of the instructor of record. If the work is graded by a committee, a grade reduction requires the approval of the majority of the committee.
   a. Single Grade Reduction: Reduction of grade or failure on project, examination, quiz, or other academic exercise on which the student is alleged to have cheated.
   b. Course Grade Reduction: Reduction of course grade or failure in the course. If the violation involves a project spanning multiple courses (such as a dissertation or multiple semester internship), the grade reduction may apply to all courses involved.
   c. Constructive or Educational Task: A task which requires the student to examine his/her dishonest behavior and which may benefit the student, campus, or community.
   d. Other: Sanctions deemed appropriate and tailored to a specific violation as determined by the faculty member/administrator. Any reasonable sanction or combination of sanctions for a given violation may be agreed upon by the student and faculty member/administrator.
2. In addition to the above, the following sanctions might be imposed through formal adjudication.
   a. Letter of Warning: A warning letter may be issued indicating that the student has been found in violation of an academic policy and that failure to comply with policies in the future may result in further disciplinary action to be handled as a second offense. The letter of warning will remain in effect for a period of time as specified by the individual or board hearing the case.
   b. Disciplinary Probation: Disciplinary probation, which is for a period of time specified by the individual or board hearing the case, is an indication that a student's status at the university is seriously jeopardized. If the student is found in violation of another IUP policy during the probationary period, a more serious sanction will be levied, including possible involuntary withdrawal from part of IUP's academic or other programs, suspension or expulsion from the university.

c. Involuntary withdrawal from part of IUP's academic or other programs: A student may be denied the right to participate in some segment of IUP's programs. Such involuntary withdrawal might be imposed on either a temporary or permanent basis.

d. Suspension: A student may be suspended from the university for a specified period of time, not to be less than the remainder of the current semester. Suspension requires that a student remove him/herself from university premises, not attend classes or social activities, and not be present on university or Student Cooperative Association property during the period of suspension.

e. Expulsion: Expulsion may be considered under any of the following circumstances: when there is a very serious violation of the academic integrity policy, when a student is proven to have violated the academic integrity policy on more than one occasion, or when a student appears before the board after already having been suspended. Expulsion from the institution is permanent. Appeals to the sanction of expulsion must be submitted to the Office of the President. If necessary, the president will consult with legal counsel in these cases.

Suspension and expulsion can be *recommended* by a faculty member/administrator, department chair, and AIB but can be imposed only by the president's designee for suspension and expulsion (currently the vice president for Student Affairs), who is responsible for verifying that due process was followed.

F. **Records and Recordkeeping**

1. **Records of Informal Resolution.** Although no official forms are filed at this level of resolution, it is strongly recommended that a faculty member/administrator and student who reach an informal agreement put the agreement in writing with a copy to each participant. This protects each party in the event of any future attempt at renegotiation.
2. **Records of Resolution by Documented Agreement.** Documented agreement resolutions are recorded on the computer database of disciplinary files maintained by the assistant to the vice president for Student Affairs. They are not considered formal disciplinary records until and unless the student is found in violation of this policy a second time. They are internal university records used for monitoring students for multiple violations only. If a second documented agreement form is filed or a student is found in violation of the policy through formal adjudication, the student will then have a formal disciplinary record which includes records of both violations. This formal record is maintained according to the IUP judicial system recordkeeping policies.
3. **Records of Formal Adjudication.** Records of academic integrity cases resolved through formal adjudication are recorded on the computer database of disciplinary files maintained by the Office of the Assistant to the Vice President of Student Affairs. They are maintained as formal disciplinary records in accordance with IUP judicial system recordkeeping policies. Records of cases involving suspension or expulsion must be maintained for a minimum of two years.

G. **Operational Notes**

1. In cases where a violation is alleged at or near the end of the semester and resolution by informal resolution, documented agreement, or formal adjudication cannot be completed before grades are submitted, the faculty member should submit a designation of "Incomplete" (I) for the student. The "I" designation will remain on the student's record until the case has been resolved. Once the case has been resolved, the "I" designation will be replaced with the appropriate grade.
2. If the violation is alleged during the semester when classes are in session, the accused student should continue attending all classes and continue to complete course requirements during the resolution of the academic integrity case.
3. The provost/designee may extend any deadline which cannot be met for what he/she deems legitimate reason.
4. Requests to constitute the AIB for hearings will be directed to the provost/designee (currently the assistant to the vice president for Student Affairs).
5. The university may withhold transcripts, grades, diplomas, or other official records pending the disposition of cases, if such action is reasonably necessary to preserve its ability to enforce its rules.
6. The provost/designee may modify the procedural provisions of these rules by the issuance of written orders to deal with particular unusual procedural situations, so long as no order shall contradict the rules of the Board of Governors of the State System of Higher Education governing due process for students, and no such rule shall deny fundamental fairness to students by, for example, effectively constituting a denial of notice or opportunity to be heard.
7. This policy will be reviewed by the Senate Academic Committee after five years.

The various forms described in this policy are available from the assistant to the vice president for Student Affairs, 215A Sutton Hall, deans' offices, or department chairs. Questions concerning the Academic Integrity Policy and Procedures can be directed to the assistant to the vice president for Student Affairs, 215A Sutton Hall.

Approved by Council of Trustees—May 15, 1998

Final Examination Policies

The final examination week is part of the regular academic program and must be incorporated into each instructor's course plan for the semester. Final examinations are not the only legitimate type of terminating activity, and therefore, the instructor may choose an appropriate activity that conforms to course objectives.

The terminating activity shall take place only at the time and location assigned by the Scheduling Center. Unless granted an excused absence, the faculty member responsible for the course must be present for the full examination period to direct the terminating activity. Faculty members may require student attendance at the terminating activity.

Faculty members who do not schedule or do not attend the terminating activity for a course may be subject to disciplinary action commensurate with unexcused absences. Block finals must be held as scheduled. Once the final examination has been set by the Scheduling Center, changes and absences must be approved by the instructor's dean.

During the examination period, the following general rules apply where conflicts exist:

1. The higher-numbered course takes precedence. Thus, a student enrolled in GEOG 102 and ECON 325 would take the ECON 325 exam at the assigned time and the make-up in GEOG 102.
2. If courses in conflict are the same level and number, an alphabetical determination by full name of the department will be made. For example, a student enrolled in ACCT 421 and CNSV 421 would take the ACCT 421 exam at the assigned time and a make-up in CNSV 421.

Maximum Number of Exams on One Day/Conflicts

A student may not be required to take more than three final exams on any one regularly scheduled examination day. For any exam over three, a make-up exam must be scheduled by the instructor for the student, at his or her request, into another mutually agreeable regular final examination period. The rules determining conflict resolution (listed above) will determine which exam or exams a student may request as make-ups.

Night Exam Policy

All tests, examinations, and quizzes should normally be administered during the prescribed course hours. Only in this way can the essential contracted nature of the time arrangements between student and professor be preserved and, at the same time, proper provisions made for the many extracurricular and personal activities involving students and faculty alike. Deviations to allow night exams for valid educational reasons, within the guidelines listed below, must be approved by the department and the dean.

Guidelines

1. Night exams can only be scheduled on Monday through Thursday evenings within the 6:00-10:00 p.m. time period.
2. Appropriate physical facilities must be arranged in advance without encroachment upon other authorized university functions.
3. If night exams are to be given, the day of the week on which they will be given must be listed in the undergraduate course schedule.
4. No night exam can take precedence over a regularly scheduled class.
5. Arrangements for nonpunitive make-up exams at a mutually agreeable time must be available for students that cannot attend the night exam.

6. For each hour of night exams, an hour of regularly scheduled class time will be cancelled. Such cancellations are prohibited during any period of two class days immediately preceding and any period of two class days immediately following holiday and/or vacation (recess) periods and semester terminations, appearing in the published academic calendar.

IUP Civility Statement

As a university of different peoples and perspectives, IUP aspires to promote the growth of all people in their academic, professional, social, and personal lives. Students, faculty, and staff join together to create a community where people exchange ideas, listen to one another with consideration and respect, and are committed to fostering civility through university structures, policies, and procedures. We, as members of the university, strive to achieve the following individual commitments:

To strengthen the university for academic success, I will act honestly, take responsibility for my behavior and continuous learning, and respect the freedom of others to express their views.

To foster an environment for personal growth, I will honor and take care of my body, mind, and character. I will be helpful to others and respect their rights. I will discourage intolerance, hatred, and injustice and promote constructive resolution of conflict.

To contribute to the future, I will strive for the betterment of the community: myself, my university, the nation, and the world.

Class Disruptions

Students and faculty alike should strive to create a class environment that reflects mutual respect and the importance of learning. If a student's behavior threatens to disrupt that environment, the faculty member has a responsibility to seek resolution of the problem.

A faculty member is empowered to request that a student leave during particular class period if, in the measured opinion of that faculty member, the student:

1. Significantly disrupts the learning process, or
2. Is a threat to others.

If the student refuses to leave or if the faculty member deems it appropriate, law enforcement officers may be called to remove the student.

If the behavior is especially egregious or potentially harmful, the faculty member may, with the consent of his/her academic dean and in consultation with the department chairperson, keep the student from returning to class until the case can be adjudicated. Because significant disruptive class behavior is a potential violation of the Academic Integrity Policy, the procedures outlined in that policy should be used to resolve the case. When appropriate, criminal charges should also be filed.

If deemed appropriate, the adjudicators may render a decision that removes the offending student from the class or the university. If so, the university will assign, in lieu of a grade, a designation that indicates a withdrawal. If grades are due before a final decision has been reached, the instructor should assign a temporary designation of I (incomplete).

If the student is allowed to return, the student will have the option of reentering another open section of the course if feasible. When appropriate, the student should be allowed a reasonable opportunity to make up any work missed during the forced absence.

If a student's grade is adversely affected by a capricious forced absence, the student may file a grade appeal.

Requirements for Graduation

Undergraduate students at IUP may pursue programs of study in any one of the seven undergraduate colleges: the Eberly College of Business and Information Technology, the College of Education and Educational Technology, the College of Fine Arts, the College of Health and Human Services, the College of Humanities and Social Sciences, the College of Natural Sciences and Mathematics, or the School of Continuing Education. A student may earn the degree of Bachelor of Arts, Bachelor of Science, Bachelor of Fine Arts, or the Bachelor of Science in Education. The Eberly College of Business and Information Technology, the College of Natural Sciences and Mathematics, and the School of Continuing Education offer Associate of Arts degree programs. To meet graduation requirements in a baccalaureate or an associate degree program, the student must satisfy all of the degree requirements, which fall into three categories:

1. university requirements
2. college requirements
3. department requirements

Requirements of the latter two categories may be found under the college and the department in which the student is pursuing a program of study.

University requirements for graduation in all curricula consist of Liberal Studies requirements, residency requirements in regard to awarding of degrees, and the semester-hour and cumulative grade-point average requirements.

Exception: Students who enrolled in a degree program prior to June 1, 1989, are not subject to Liberal Studies requirements; they will complete degree requirements including the General Education components outlined in earlier editions of the *Undergraduate Catalog*. Transfer students entering the university between June 1, 1989, and June 1, 1991, were assigned either to General Education or Liberal Studies at the time their transcripts were evaluated. All transfer students admitted after June 1, 1991, are subject to the Liberal Studies requirements.

A student may earn a second undergraduate baccalaureate degree by completing a minimum of thirty additional semester hours. (See Second Baccalaureate Degree.) It is not possible to receive two or more baccalaureate degrees simultaneously. However, a student may complete one or more secondary majors while earning the primary degree.

Academic Life During the Freshman Year

During the Summer Orientation, as described in the section on orientation, students meet with faculty advisors to plan a program of courses for their first year. This careful planning considers students' individual preferences, the results of placement testing, and degree program requirements.

With a typical freshman academic schedule, students progress both in the universitywide Liberal Studies program and in their intended majors.

Three Liberal Studies courses are designed especially for freshmen, and all students are expected to complete these courses during their first year. The three are ENGL 101 College Writing, HIST 195 History: The Modern Era, and one course from a list of Fine Arts selections.

College Writing enhances skills in written expression that are essential to success at the university. History: The Modern Era builds critical thinking skills and provides a foundation of knowledge for subsequent courses. Whichever fine arts course is chosen encourages an appreciative participation in campus cultural life.

Professors teaching these courses work cooperatively with each other and with Student Affairs Division staff to integrate class work with campus lectures and arts events. Study skills development and tutoring services are also provided as necessary.

Semester Hour and Cumulative Grade-Point Average Requirement

Each student must complete a minimum of 124 semester hours to graduate, including 53 semester hours in Liberal Studies (all on a passing basis) and must have a 2.0 ("C" grade) cumulative GPA and a 2.0 ("C") GPA in his/her

major and/or minor field. Some programs require more than 124 semester hours for graduation.

Liberal Studies

All students must fulfill the requirements of the university's Liberal Studies program. This involves a minimum of 53 semester hours divided among Learning Skills, Knowledge Areas, and Synthesis. The number of semester hours may rise slightly depending on student choices. Different colleges and sometimes departments within colleges may have specific variations as to how these Liberal Studies requirements are to be met.

Liberal Studies provides the broad vision and understanding that enable individuals to enjoy full, rich lives and to play constructive roles in their communities. The goals for Liberal Studies include (1) the development of important modes of thinking and intellectual skills: critical thinking, literacy, understanding numerical data, historical consciousness, scientific inquiry, ethical perception, and aesthetic sensitivity; (2) the acquisition of a body of knowledge or understanding essential to an educated person; and (3) an understanding of the physical, as well as the intellectual, nature of human beings.

Liberal Studies Requirements

Note: Specific courses may be required or recommended by colleges or major departments; see degree program outlines for specifications.

Additional courses may be added to some categories during the next academic year.

Learning Skills:
English Composition: Two Courses — **7sh**

ENGL 101	College Writing	4
ENGL 202	Research Writing (sophomore standing)	3

Learning Skills:
Mathematics: One Course from List — **3–4sh**

MATH 101	Foundations of Mathematics	3
MATH 102	Finite Mathematics [inactive]	3
MATH 105	College Algebra	3
MATH 110	Elementary Functions	3
MATH 115	Applied Mathematics for Business	3
MATH 121	Calculus I for Business, Natural, and Social Sciences	4
MATH 123	Calculus I for Physics, Chemistry, and Mathematics	4
MATH 127	Calculus I	4
MATH 151	Elements of Mathematics I (restricted to designated majors)	3
MATH 152	Elements of Mathematics II (restricted to designated majors)	3
MATH 217	Probability and Statistics	3
BTED 111	Foundations of Business Mathematics (restricted to designated majors)	3

Humanities: Three Courses* — **9sh**
*One course in history, one in literature, and one in philosophy or religious studies.

History:

HIST 195	History: The Modern Era	3

Literature:

ENGL 121	Humanities Literature	3
FNLG 121	Humanities Literature (taught in English)	3
ENGL 122	Introduction to Literary Analysis (English majors)	3

Philosophy or Religious Studies:

PHIL 101	Informal Logic: Methods of Critical Thinking	3
PHIL 120	Introduction to Philosophy	3
PHIL 221	Symbolic Logic I	3
PHIL 222	Ethics	3
PHIL 223	Philosophy of Art	3
RLST 100	Introduction to Religion	3
RLST 110	World Religions	3
RLST 250	Understanding the Bible	3
RLST 290	Christianity	3

Fine Arts: One Course from List — **3sh**

ARTH 101	Introduction to Art	3
DANC 102	Introduction to Dance	3
MUTH 101	Introduction to Music	3
THTR 101	Introduction to Theater	3

Natural Science: One Option — **8–10sh**

Option I: Two-semester Laboratory Course Sequence — **8sh**
Two courses with laboratories (4sh each), paired together in a sequence, from the natural science laboratory course list.

Natural Science Laboratory Sequences:

BIOL 103/104	General Biology I and II	8
CHEM 101/102	College Chemistry I and II	8
CHEM 111/112	General Chemistry I and II	8
CHEM 113/114	Concepts in Chemistry and Basic Inorganic Chemistry	8
Two of the following three, in any order:		
GEOS 101/102	The Dynamic Earth with lab	4
GEOS 103/104	Oceans and Atmospheres with lab	4
GEOS 105/106	Exploring the Universe with lab	4
GEOS 111/112	and GEOS 113/114 Earth Science for Educators I and II with labs	8
GEOS 121/122	and GEOS 131/132 Physical Geology and Historical Geology with labs	8
PHYS 111/121	and 112/122 Physics I and II with labs	8
PHYS 131/141	and 132/142 Physics I and II with labs (calculus)	8
SCI 105/106	Physical Science I and II (either order)	8

Option II: One Laboratory plus Two Nonlaboratory Courses — **10sh**
One course with laboratory (4sh) from the natural science laboratory course list followed by two courses (3sh each) from natural science nonlaboratory course list. One of the nonlaboratory courses may be counted again among the Liberal Studies Electives.

Natural Science Laboratory Courses:

BIOL 103	General Biology I	4
CHEM 101	College Chemistry I	4
CHEM 111	General Chemistry I	4
CHEM 113	Concepts in Chemistry	4
GEOS 101/102	The Dynamic Earth with lab	4
GEOS 103/104	Oceans and Atmospheres with lab	4
GEOS 105/106	Exploring the Universe with lab	4
GEOS 111/112	Earth Science for Educators I with lab	4
GEOS 113/114	Earth Science for Educators II with lab	4
GEOS 121/122	Physical Geology with lab	4
GEOS 131/132	Historical Geology with lab	4
PHYS 111/121	Physics I with lab	4
PHYS 131/141	Physics I (calculus) with lab	4
PHYS 151/161	Medical Physics with lab	4
SCI 105	Physical Science I	4
SCI 106	Physical Science II	4

Natural Science Nonlaboratory Courses:

BIOL 114	Environmental Science	3
BIOL 115	Biotic Diversity of North America	3
BIOL 116	Introduction to Marine Biology	3
BIOL 117	Understanding HIV Biology and Aids	3
BIOL 119	Emerging Diseases	3
GEOS 101	The Dynamic Earth	3
GEOS 103	Oceans and Atmospheres	3
GEOS 105	Exploring the Universe	3
GEOS 111	Earth Science for Educators I	3
GEOS 113	Earth Science for Educators II	3
GEOS 141	Introduction to Ocean Science	3
GEOS 150	Geology of National Parks	3
GEOS 151	The Age of Dinosaurs	3
GEOS 221	Physical Resources of the Earth	3
PHYS 101	Energy and the Environment	3
PHYS 111	Physics I	3
PHYS 112	Physics II	3
PHYS 131	Physics I (calculus)	3
PHYS 132	Physics II (calculus)	3
PHYS 151	Medical Physics	3

Social Sciences: Three Courses from List* **9sh**

*No course prefix may be used more than once

ANTH 110	Contemporary Anthropology (1)	3
ANTH 211	Cultural Anthropology (1)	3
ANTH 213	World Archaeology	3
CRIM 101	Crime and Justice Systems	3
ECON 101	Basic Economics	3
ECON 121	Principles of Economics I	3
GEOG 101	Intro to Geography: Human Environment	3
GEOG 102	Geography of U.S. and Canada	3
GEOG 104	Geography of the Non-Western World (1)	3
PSYC 101	General Psychology	3
PLSC 101	World Politics (1)	3
PLSC 111	American Politics	3
SOC 151	Principles of Sociology	3
SOC 231	Contemporary Social Problems	3

(1) Also fulfills requirement for non-Western course

Health and Wellness: One Course **3sh**

HPED 143	Health and Wellness	3
FDNT 143	Nutrition and Wellness	3

An alternate method of fulfilling this requirement is the completion of one year of Military Science/ROTC: MLSC 101 Introduction to Military Science and Lab (2sh) and MLSC 102 Fundamentals of Military Science and Lab (2sh). The courses MLSC 203 and 204 may be substituted for MLSC 101 and 102. Veterans are given 4sh toward these requirements by validating two years' active duty via form DD214.

Liberal Studies Electives: Three Courses from List* **9sh**

*At least one course must be numbered 200 or higher

*No course carrying the student's major prefix may be used

*No course prefix may be used more than once, except for intermediate-level foreign language prefixes (FRNC , GRMN , ITAL, SPAN , LATN, and GREK), which may be used twice.

See list of nonlaboratory natural sciences for additional courses which may be used as Liberal Studies electives.

See list of Non-Western Cultures courses, some of which may be used as Liberal Studies Electives.

The following courses are also approved:

ARHI 205	Ancient to Medieval Art	3
ARHI 206	Renaissance to Baroque Art	3
ARHI 211	Modern Art	3
ARHI 222	Art in America	3
ANTH 286	Marriage, Kinship, and the Family [same as SOC 286]	3
BTED 101	Microbased Computer Literacy [same as COSC/IFMG 101]	3
BTED 201	Internet and Multimedia [same as COMM/COSC/IFMG/LIBR 201]	3
COMM 101	Comm Media in American Society	3
COMM 201	Internet and Multimedia [same as BTED/COSC/IFMG/LIBR 201]	3
COMM 380	History of African Americans in Film	3
COSC 101	Microbased Computer Literacy [same as BTED/IFMG 101]	3
COSC 201	Internet and Multimedia [same as BTED/COMM/IFMG/LIBR 201]	3
CNSV 101	Personal and Family Management	3
CNSV 315	Consumer Economics and Family Finance	3
ECON 122	Principles of Economics II	3
ENGL 349	English Bible as Literature	3
FDNT 145	Introduction to Nutrition	3
FRNC 201	College French I (2)	3
FRNC 202	College French II (2)	3
FRNC 203	Accelerated College French	6
FRNC 301	Portraits of Women in the French Novel	3
GEOG 230	Cultural Geography	3
GEOG 231	Economic Geography	3
GEOG 251	Geography of Pennsylvania	3
GEOG 253	Geography of Europe	3
GEOG 261	Geography of Wine	3
GRMN 251	German III (2)	3
GRMN 252	German IV (2)	3
HMEC 218	Child Development	3
HMEC 224	Marriage and Family Relations	3
HIST 210	Ancient Civilizations: The Middle East and the Eastern Mediterranean	3
HIST 212	Ancient and Medieval Europe	3
HIST 214	Themes in American History	3
HIST 305	Renaissance and Reformation	3
HIST 355	African History I: Antiquity to 1600	3
HIST 363	Thought and Culture in Early America	3
HIST 364	Thought and Culture in Modern America	3
HIST 366	African-American Women	3
IFMG 101	Microbased Computer Literacy [same as BTED/COSC 101]	3
IFMG 201	Internet and Multimedia [same as BTED/COMM/COSC/LIBR 201]	3
ITAL 201	Intermediate Italian III	3
ITAL 202	Intermediate Italian IV	3
JRNL 105	Journalism and the Mass Media	3
JRNL 250	Women and the Press	3
JRNL 375	World News Coverage	3
LATN 102	Elementary Latin II	4
LATN 201	Intermediate Latin (2)	4
LIBR 201	Internet and Multimedia [same as BTED/COMM/COSC/IFMG 201]	3
MATH 121	Calculus I for Business, Natural, and Social Sciences (1)	4
MATH 122	Calculus II for Business, Natural, and Social Sciences	4
MATH 123	Calculus I for Physics, Chemistry, and Mathematics (1)	4
MATH 124	Calculus II for Physics, Chemistry, and Mathematics	4
MATH 152	Elements of Mathematics II (1) (specified majors only)	3
MATH 214	Probability and Statistics for Business Majors	3
MATH 216	Probability and Statistics for Natural Sciences	4
MATH 217	Probability and Statistics (1)	3
MATH 241	Differential Equations	3
MUHI 301	Music History I	3
MUHI 302	Music History II	3
PSYC 310	Development Psychology	3
PSYC 321	Abnormal Psychology	3
PSYC 330	Social Psychology	3
PSYC 378	Psychology of Death and Dying	3
PHIL 232	Philosophical Perspectives on Love, Marriage, and Divorce	3
PHIL 321	Symbolic Logic II	3
PHIL 323	Political Philosophy	3
PHIL 324	History of Philosophy I: Ancient and Medieval	3
PHIL 325	History of Philosophy II: Renaissance and Modern	3
PHIL 326	Phenomenology and Existentialism	3
PHIL 330	Philosophy of Science	3
PHIL 400	Ethics and Public Policy	3
PHIL 405	Justice and Human Rights	3
PHIL 410	Contemporary Analytic Philosophy	3
PHIL 420	Metaphysics	3
PHIL 421	Theory of Knowledge	3
PHIL 450	Philosophy of Law	3
PHIL 460	Philosophy of Language	3
PLSC 346	Political Sociology [same as SOC 458]	3
RLST 200	Religion and Culture: Their Interaction	3
RLST 210	World Scriptures	3
RLST 260	American Religious Development	3
RLST 312	Archaeology and the Bible	3
RLST 329	Philosophy of Religion	3
RLST 410	Early Christian Thought	3
RLST 440	Modern Christian Thought	3
SAFE 145	Workplace Safety Today and Tomorrow	3
SOC 286	Marriage, Kinship, and the Family [same as ANTH 286]	3
SOC 337	World Societies and World Systems	3

SOC 340	Sociology of Industry	3
SOC 362	Racial and Ethnic Minorities	3
SOC 363	Sociology of Sex and Gender	3
SOC 445	Social Stratification	3
SOC 458	Political Sociology [same as PLSC 346]	3
SPAN 102	Elementary Spanish II	4
SPAN 122	Spanish for Health Care Professionals II	3
SPAN 132	Spanish for the Hospitality Industry II	3
SPAN 201	Intermediate Spanish (2)	4
SPAN 211	Intensive Intermediate Spanish [formerly SPAN 201]	6
WMST 200	Introduction to Women's Studies	3

(1) Students may use this course to fulfill either the Learning Skills: Mathematics requirement or a Liberal Studies Elective requirement, but not both.

(2) Higher-level language courses may be substituted by students demonstrating such ability on placement tests.

Non-Western Cultures: One Course from List **3sh***

*Students must fulfill this requirement by completing one course from the list; most of these courses will at the same time fulfill other requirements set by Liberal Studies or in some cases by a college or department.

Also fulfills LS Social Science requirement:

ANTH 110	Contemporary Anthropology	3
ANTH 211	Cultural Anthropology	3
GEOG 104	Geography of the Non-Western World	3
PLSC 101	World Politics	3

Also fulfills LS Elective requirement:

AFI31	Introduction to Pan-African Studies	3
ARHI 300	Native American Art	3
ANTH 271	Cultural Area Studies: Africa [same as SOC 271]	3
ANTH 272	Cultural Area Studies: China [same as SOC 272]	3
ANTH 273	Cultural Area Studies: Southeast Asia [same as SOC 273]	3
ANTH 274	Cultural Area Studies: Latin America [same as SOC 274]	3
ANTH 314	Native Americans [same as SOC 314]	3
ANTH 350	Anthropology of Women	3
ANTH 365	Native North American Religions [same as RLST 365]	3
COMM 230	Issues in International Communication	3
ECON 350	Comparative Economic Systems	3
GEOG 252	Geography of Latin America	3
GEOG 254	Geography of Russia and the Soviet Sphere	3
GEOG 255	Geography of Africa	3
GEOG 256	Geography of East Asia	3
GEOG 257	Geog of South and Southeast Asia	3
HIST 327	Soviet Union and Contemporary Russia	3
HIST 330	History of the Islamic Civilization	3
HIST 331	Modern Middle East	3
HIST 356	African History II: 1600 to present	3
HIST 367	Native American History	3
ITST 281	Special Topics in Non-Western Studies	3
PLSC 382	Political Systems: Africa	3
PLSC 387	Political Systems: Latin America	3
PLSC 389	Developing Nations	3
RLST 311	Eastern Philosophy	3
RLST 360	African Religions	3
RLST 365	Native North American Religions [same as ANTH 365]	3
RLST 370	Religions of China and Japan	3
RLST 375	Religions of India	3
RLST 380	Islam	3
SOC 271	Cultural Area Studies: Africa [same as ANTH 271]	3
SOC 272	Cultural Area Studies: China [same as ANTH 272]	3
SOC 273	Cultural Area Studies: Southeast Asia [same as ANTH 273]	3
SOC 274	Cultural Area Studies: Latin America [same as ANTH 274]	3
SOC 314	Native Americans [same as ANTH 314]	3
SPAN 244	Modern Mexico	3
SPAN 344	20th-Century Spanish-American Civ and Culture [taught in Spanish]	3
SPAN 364	Survey of Spanish-American Literature [taught in Spanish]	3

Fulfills LS Non-Western requirement only:

CRLG 151, 201, or 251	Arabic II, III, or IV	3
CRLG 152, 202, or 252	Chinese II, III, or IV	3
CRLG 155, 205, or 255	Hindi II, III, or IV	3
CRLG 156, 206, or 256	Hungarian II, III, or IV	3
CRLG 158, 208, or 258	Japanese II, III, or IV	3
CRLG 159, 209, or 259	Korean II, III, or IV	3
CRLG 162, 212, or 262	Russian II, III, or IV	3
ECON 339	Economic Development I	3
PLSC 285	Comparative Government II: Non-Western Political Systems	3

Certain Study Abroad programs in non-Western culture areas are offered (information is in the respective catalog section; further information is available in the Office of International Services).

Synthesis: One Course **3sh**

LBST 499 Senior Synthesis (required of all students) 3

Prerequisite: 73 or more semester hours earned

This course helps students understand and handle complex intellectual and social issues from multiple perspectives. A selection of topics is available each semester and summer session. Students should schedule the course during the senior year, or at least no earlier than the last half of the junior year. In order to broaden their experiences, students are encouraged to enroll in synthesis sections taught by instructors outside of the students' major fields.

Writing Across the Curriculum: Minimum of Two "W" Courses

All students must include among the total courses required for graduation a minimum of two designated writing-intensive courses. One of these courses must be in the student's primary major; the other(s) may be in Liberal Studies, college or major requirements, or free electives. Such courses, which involve extensive use of writing as part of the learning experience, are identified with a "W" as part of the section number in each semester's schedule of classes listing on URSA.

Eligibility and Application for Graduation

Commencement ceremonies are in May at IUP at the conclusion of the spring semester and in December at the conclusion of the fall semester. Only students who have completed all requirements for graduation by the end of the semester are eligible to participate in the commencement exercises. Students who have withdrawn from courses or have elected to take incompletes or have failed courses during the semester and thus have not met the requirements for graduation may not participate in commencement exercises until those requirements have been fulfilled. Students completing requirements in August and December are included in the program list for the December ceremony.

Students are responsible for knowing and fulfilling the requirements for graduation in their degree program. It is the student's responsibility to complete a form to apply for graduation and submit it to the office of the dean of his/her college early in the term prior to graduation.

Certification for graduation is not final until approved by the dean of the college in which the student is enrolled. Diplomas will not be issued until all bills and obligations have been satisfied, including the degree fee, and final certification for graduation has been issued by the student's college dean.

Pre-Approval for Transfer Coursework

Students enrolled at IUP who wish to take coursework at another institution (either during the summer or regular semesters) must complete an Application for Coursework Outside IUP prior to taking the course(s). Only the credits from the course(s) transfer, not the grade; therefore, students cannot use outside coursework for IUP's repeat policy. Only the credits for which students receive the grade of A, B, or C will transfer. If P/F is the only grading option available, there must be a narrative evaluation from the faculty member certifying that the work was of C level or better. No more than 60 semester hours total may be earned at a junior or community college for application toward an IUP degree. If the courses are being taken within the student's last thirty credits, the courses must be taken at IUP unless the

student's residency requirement for awarding of degrees is waived by the college dean. Courses without prior approval are taken at the risk of the student; there is no obligation on the part of any officer of this university to accept or transfer such credit.

Forms for approval of off-campus coursework are available in the Office of Transfer Credit Evaluation/Admissions Office. Full directions on the form outline the steps involving the transfer evaluation, student's advisor, and college dean, or designee. After completing off-campus coursework, students should have the institution at which the work was taken send a final official transcript directly to Transfer Evaluation Services, 216 Pratt Drive, IUP, Indiana, PA 15705. Copies of transcripts issued to or hand carried by students will not be accepted.

Residency Requirement for Awarding of Degrees

All students receiving an initial IUP baccalaureate degree are required to complete 45 semester hours in IUP courses. At least 15 semester hours in IUP courses are required to fulfill an IUP major and a minimum of 6 semester hours for a minor. Normally, the student will complete the final 30 semester hours in residence in IUP courses, unless specific approval has been secured from the dean of the student's college. Exception to the above requirements for courses to be earned in residence at IUP may be granted by the college deans based upon the appropriateness and academic integrity of the courses in question. This approval is generally sought as part of the process for prior approval of off-campus coursework.

Non-Native Students: English Language Requirements

Non-native students of English, either international students or those from the U.S. for whom English is not their first learned language, are required to take an ESL Screening/Placement Test prior to registration in the first semester attending IUP. The test is administered prior to registration in both the fall and spring semesters. Results of this test are used to determine for which English course (ENGL 100/ESL, ENGL 101/ESL, ENGL 202/ESL, ENGL 121/ESL) a newly admitted non-native student must register. In addition, any currently enrolled non-native student can take the regularly scheduled test to determine registration for non-ESL English courses. For further information, contact Chair, English Department, 724-357-2261.

Program Changes

To insure their quality and relevance, academic programs at IUP are subject to review and change by duly appointed and responsible university groups. Because of this, the university recognizes that provisions must be made to prevent hardship to students already enrolled in programs if changes later occur in specific or general program requirements. Students affected by changes in programs, policies, and regulations are therefore given the option of following those requirements that are in effect when the student was first enrolled in the program or those in effect at the time of expected graduation. The student cannot, of course, combine chosen elements of the two. Should a question of rule interpretation arise with respect to changes, the student, the student's advisor, or both should petition the college dean for a decision about which requirements apply.

Timely Completion of Degree Requirements

The minimum total semester-hour requirement for a baccalaureate degree at IUP is 124. Students who enroll in degree programs that require more than 124, or who seek the added benefit of a double major, minor, or specialized program, or who change majors should plan their sequence of courses carefully with an advisor. Such students should be alert to the possibility that they may need to carry a heavier-than-average class load in order to complete the degree in eight semesters. In some situations, summer work or an extra semester may be necessary. The need to enroll in remedial or other preparatory coursework or to repeat courses may also affect progress toward a degree.

Undergraduate Catalog Applicability Time Frame

The university reserves the right to modify degree requirements through established governance channels. However, the general policy has been established that the following time frame regulations form the basis for application of the university's undergraduate degree requirements:

1. A student who has been in continuous registration (fall and spring semesters) or who has interruption(s) of less than two calendar years is governed by the requirements outlined in the catalog in effect at the time of entrance into a degree program (major).
   a. A student who changes major will be governed by the requirements of the major and/or college at the time of acceptance into the new major, without change of Liberal Studies requirements except as specified by the new major.
   b. A student entering through the nondegree program is governed by the requirements in effect at the time degree candidacy is awarded.
   c. A part-time student may be covered by these provisions of continuous registration to a maximum of ten years.
2. A student whose education is interrupted by two or more calendar years will be governed by the requirements in effect at the time of readmission to the university. The readmission may carry specific requirements/substitutions necessary to provide for program integrity.
3. The applicability of coursework completed more than ten years prior to the degree date is subject to review by the dean or designee for evaluation on a course-by-course basis.

Academic Affairs Division Areas

Mark J. Staszkiewicz, Provost
Mark J. Piwinsky, Vice Provost for Administration and Technology
Nicholas E. Kolb, Associate Provost and Dean, School of Continuing Education
Yvonne B. Redd, Assistant to the Vice Provost

Website: *http://www.iup.edu/academicaffairs*

The Academic Affairs areas below provide instruction in several disciplines that are not specific to one of the university's distinct colleges. They offer services and instruction under the direction of the Provost's Office.

The University Libraries

Rena K. Fowler, Dean; Elizabeth A. Evans, Associate Dean Ronald A. Steiner, Chairperson; Brown, Connell, Diaz-Martin, Drummond, Hooks, Janicki, Janosko, Jen, Joseph, Kirby, Knupp, Laude, Lucas, McDevitt, Rahkonen, Shively, Zorich; and professors emeriti Chamberlin, Lafranchi, Scheeren, Snead, Wolf

Website: *http://www.iup.edu/library*

The IUP Libraries serve the academic and scholarly needs of students and faculty with 806,332 volumes and 3,437 journal titles, as well as media, micro documents, and information databases. In addition to the main facility, there is a library at each of the branch campuses at Punxsutawney and Kittanning, as well as the Cogswell Music Library and the University School. The online catalog is accessible throughout the libraries and on the Internet from remote locations. IUP students can use a variety of electronic resources, including abstracts, statistics, and full-text articles online.

Library faculty members offer individual and group instruction in using the library through a 1-semester-hour course, LIBR 151 Introduction to Library Resources.

Robert E. Cook Honors College

Janet E. Gochel, Director

Website: *http://www.iup.edu/honors*

The Robert E. Cook Honors College is IUP's universitywide honors program for undergraduate students of all majors who are accepted into the program. Its goal is to provide a unique educational environment in which students of high ability and motivation can achieve their potential in a nurturing learning community of fellow students and professors. The Honors College makes an intentional effort to see that students and faculty are provided with integrated courses, an appreciation for multiple perspectives on important issues, and common learning experiences wherever possible; it strives to see that the learning community remains cohesive with both academic and cocurricular components throughout the four years of the student's honors experience.

The Robert E. Cook Honors College provides a challenging opportunity for academic and personal development through an integrated program of curriculum, residence, and cocurricular activities. Whitmyre Hall has been renovated into a combined honors residential/academic facility which includes classrooms and program offices as well as student rooms and cocurricular spaces.

Students in any academic major may apply for admission to the Honors College. Students may enter the program as freshmen or later as sophomore "transfer" students from either another university or from IUP. An application is required and is evaluated by the Honors College Admissions Board.

Requirements of the Program

Students accepted into the Robert E. Cook Honors College as freshmen are required to live in Whitmyre Hall during the freshman year and are

encouraged to remain in the honors residence hall throughout their undergraduate career as space permits. Exceptions to the freshman residency requirements will be made only for nontraditional students (students twenty-five or older or students who are married and/or have children) or for students who reside at home with their legal guardians in the Indiana area while at IUP. Application for exemption from the freshman residency requirement should be made in the form of a letter to the Honors College Director at the time of application to the program.

Students in the Honors College are required to maintain an overall 3.25 GPA. A student who falls below the 3.25 GPA will have one semester of Honors College probation during which he/she may attempt to raise the GPA to 3.25 and remain in good standing. Students who are dismissed from the Honors College due to GPA may apply for readmission after having raised the GPA to acceptable honors standards.

Course Requirements for Students Admitted as Freshmen

Students admitted as freshmen are required to complete 23 semester hours of honors work including:

14 hours: Honors College Core I, II, and III (HNRC 101, 102, and 201) —a three-semester "core" sequence of 14 semester hours which replaces Liberal Studies requirements for ENGL 101 and 121, MUSC 101, THTR 101, ARHI 101, HIST 195, and either RLST 100 or PHIL 120.

3 hours: Honors LBST 499 Senior Synthesis

6 hours: An additional 6 semester hours of Honors College courses which must fulfill the following requirements:

A. At least one advanced honors course (300 level or above) in addition to LBST 499
B. At least one honors course in a non-humanities area (the same course might meet requirements A and B)
C. An honors course during every academic year (requirement may be waived for students participating in study abroad or off-campus internships)

Students are also encouraged to complete an undergraduate thesis for graduation from the Honors College with distinction.

Course Requirements for Students Admitted as Sophomores

Sophomore "transfer" students are required to complete 18 semester hours of honors work and must meet the same course requirements as freshmen with the exception of HNRC 101 and 102, from which they are exempted.

Applicants who may be interested in further information are invited to contact the university Admissions Office at 724-357-2230 or 1-800-442-6830 or the office of the Honors College in Whitmyre Hall at 724-357-4971.

Military Science

LTC Robert Gibson, Chairperson; SGT Acy, CPT Allmon, SFC Bennett, SFC Brangard, MAJ Brown, MAJ Higgins, MSG Madera, Mrs. Rankin, CPT Wagner

Website: *http://www.iup.edu/rotc*

Reserve Officers' Training Corps

The Unites States Army established a Senior Reserve Officers' Training Corps program at the university in 1950. The ROTC program teaches leadership training that students can apply throughout their careers, be they in business, industry, technology, education, the physical sciences, or the humanities. All Military Science credits count toward graduation, and students who complete the total program can earn a commission as a second lieutenant and receive placement in one of twenty-four professional officer specialties in the U.S. Army, including Military Intelligence, Military Police, Signal, Medical Service, and the Corps of Engineers.

The ROTC program is divided into two phases: the Basic Course (freshman and sophomore years) and the Advanced Course (junior and senior years). In most cases, students progress through the ROTC program by enrolling in MLSC 101 and 102 as freshmen. By taking MLSC 101 and 102, the student fulfills the university's 3-semester-hour Liberal Studies requirement in Health and Wellness. Students who continue in the Basic Course by enrolling in MLSC 203 and 204 as sophomores incur no military obligation, but they retain the opportunity to compete for a full-tuition ROTC scholarship. Whether they win an ROTC scholarship or not, all students who complete the Basic Course are eligible to enroll in the ROTC Advanced Course. All Advanced Course students receive financial assistance while they are enrolled in the Advanced Course.

What ROTC Offers

- ROTC offers a comprehensive academic program in military leadership and teaches practical skills such as self-defense, adventure training, rappelling, marksmanship, orienteering, and first-aid techniques.
- Regular ROTC classes for two semesters satisfy the mandatory Health and Wellness Liberal Studies requirement for graduation.
- Equipment, ROTC textbooks, and uniforms are issued, without cost, to enrolled students.
- Students enrolled in the Basic Course (MLSC 101, 102, 203, and 204) become eligible for full-tuition scholarships and enrollment in the ROTC Advanced Course.
- Students formally enrolled in the Advanced Course (MLSC 305, 306, 407, and 408) receive a cash stipend ($250-400 each month) for ten months during the academic year and receive $600 each year for books.
- Students who complete the Advanced Course and graduate from the university receive commissions as second lieutenants and serve in one of three Army components: Active Army, National Guard, or Army Reserve.

ROTC Basic Course

The first two years of Military Science (MLSC 101, 102, 203, and 204) provide a background of the historical role of military forces as well as current national military objectives. In addition, students develop basic leadership skills in problem solving and decision making and learn survival techniques, map reading, self-defense, rappelling, and marksmanship. Graduates of the Basic Course incur no commitment to enroll in the ROTC Advanced Course and incur no obligation for military service. Students may enroll or withdraw from any of the four courses in the ROTC Basic Course under the same provisions and in the same manner as other academic courses at IUP. Veterans of U. S. Armed Forces, Junior ROTC and Civil Air Patrol graduates, and students who complete the ROTC Basic Camp at Fort Knox, Kentucky, may receive exemption from the ROTC Basic Course if approved by the Professor of Military Science, but they will not automatically receive academic credit for the course.

ROTC Advanced Course

The last two years of Military Science (MSLC 305, 306, 407, and 408) compose the Advanced Course and lead to a commission as an officer in the United States Army. To be eligible to enroll in the Advanced Course, a student must meet these criteria: be a citizen of the United States; be physically fit and pass a physical examination; be an enrolled academic junior or senior with at least a 2.0 GPA; be not less than seventeen years of age but less than thirty by the anticipated graduation date; successfully complete the ROTC Basic Course or its equivalent; and be accepted by the Professor of Military Science. Advanced Course students study advanced leadership, management, professional ethics, small unit tactics, military law, and instructional and training techniques. Practical application is the rule, and students have the opportunity to practice and polish their skills as members of the ROTC battalion leadership. Once Advanced Course students agree in writing to complete the Advanced Course, graduate on time, and accept a commission as an officer, they become eligible to receive a monthly cash stipend of $250-$400 for ten months of the academic year and also receive $600 a year for books.

Scholarships

High school seniors who have applied to IUP can apply online for IUP Army ROTC scholarships at *http://www.armyrotc.com*. Currently enrolled IUP undergraduate students can compete for two- and three-year ROTC scholarships, and graduate students can compete for two-year ROTC scholarships even if they are not currently enrolled in Military Science courses. To be fully eligible, applicants must meet these criteria: 2.5 GPA, full-time student, U.S. citizen, physically qualified, and administratively qualified. Regardless of the term of the scholarship (either two, three, or four years), all IUP ROTC scholarships offer these benefits for each year that the

scholarship is in effect: full tuition (up to $10,000), $600 for books, and $250-$400 per month for ten months of the school year. Call 1-800-HUP-ROTC for application instructions.

ROTC cadets who want to attend medical or veterinary school after graduation are eligible to compete for scholarships available through the Army Health Professional Scholarship Program. Candidates must have a 3.5 undergraduate GPA, score 29 or higher on the MCAT, and be accepted to an accredited medical school. Contact the Department of Military Science at 1-800-HUP-ROTC for more information.

Program in Military Science 20

Required courses:

MLSC 101	Introduction to Military Science	2sh (1)
MLSC 102	Fundamentals of Military Science	2sh (1)
MLSC 203	Fundamentals of Tactical Operations, Techniques of Leadership, and Weapons Characteristics	2sh (2)
MLSC 204	National Security and Fundamentals of Military Topography	2sh (2)
MLSC 305	Fundamentals of Leadership and Modern Learning/Teaching Relationship	3sh
MLSC 306	Study of Advanced Leader Planning and Execution of Modern Combat Operations	3sh
MLSC 407	Management of the Military Complex to Include Fundamentals of Military and International Law	3sh
MLSC 408	Seminar in Military Analysis and Management	3sh

(1) MLSC 101-102 may substitute for the Liberal Studies requirement in Health and Wellness.
(2) MLSC 203-204 are available as free electives to all students without any military obligation.

Women's Studies Program

Brenda M. Mitchell, Director

Website: *http://www.iup.edu/womens*

The Women's Studies minor is designed to examine the status and experiences of women from a multidisciplinary perspective. The courses use a variety of methods and disciplinary perspectives to explore the impact of gender on the experiences of the individual. Women's contributions to a variety of fields and the historical, literary, and cultural images of women are also addressed. Students are encouraged to challenge traditional theories and research regarding women and to develop a critical, multidisciplinary, multicultural, and gendered view of the world. Courses taught within the minor typically involve the students through innovative, experiential classroom exercises and written assignments. Courses in Women's Studies address social equity issues and encourage students to perceive themselves as capable of transforming society.

A minor in Women's Studies indicates to the prospective employer an awareness of and sensitivity to gender issues. This awareness may be needed in the following positions: personnel specialist, affirmative action officer, crisis intervention specialist, family and youth services provider, legal advocate. A minor in Women's Studies can contribute to success in a variety of fields including communication, counseling, criminology, education, health, journalism, law, politics, psychology, and applied sociology.

Minor—Women's Studies 15

Required course: 3

WMST 200	Introduction to Women's Studies	3sh

Students receive approval for a specified course of study from the following list of courses: (1) 12

ANTH 350	Anthropology of Women	3sh
CRIM 390	Women and Crime	3sh
ENGL 225	Introduction to Literature by Women	3sh
ENGL 336	Language, Gender, and Society	3sh
FRNC 301	Portraits of Women in the French Novel	3sh
HIST 369	Women in America	3sh
HIST 390	History of Women—World Cultures	3sh
HPED 430	The American Woman and Sport	3sh
JRNL 250	Women and the Press	3sh
PHIL 242	Philosophical Perspectives on Love, Marriage, and Divorce	3sh
PSYC 379	Psychology of Human Sexuality	3sh
PSYC 411	Psychology of Women	3sh
SOC 363	Sociology of Gender	3sh
SOC 427	Spouse Abuse	3sh
WMST 482	Independent Study	var-1-3sh
XXXX 481	Special Topics (2) (offered within department)	var-1-3sh
XXXX 493	Internship (3)	var-1-3sh

(1) Students receive approval for a specified course of study from the above list of courses and, with permission from the director of Women's Studies, selected women's studies courses that have been recently developed. Please see webpage *http://www.iup.edu/womens* for current information.
(2) Examples of XXXX 481 offered: ART 481 Maidens to Madonna, BTED 481 Women and Business, RLST 481 Women and Religion, WMST 481 Special Topics in Women's Studies
(3) Internships (up to 3sh) may be counted towards the minor.

Office of International Affairs

Patrick A. Carone, Director; Michele L. Petrucci, Foreign Student Advisor

Website: *http://www.iup.edu/international*

The Office of International Affairs (OIA) provides the leadership for Indiana University of Pennsylvania's involvement in a wide range of international activities.

The OIA is a central source of information which provides special services for admitted international students, visiting scholars, and international visitors and faculty. The office provides the following services to students:

- an extensive orientation program for new international students
- advising on immigration matters
- counseling on cultural and personal matters
- preparation and processing of immigration documents
- medical insurance information for international students and exchange/study abroad participants
- financial assistance to qualified students through the partial tuition waiver
- a predeparture orientation program for exchange and study abroad participants
- a reentry program for participants returning from exchange or study abroad

In addition, this office services the International Student Club, which links students to the larger community. The club provides an opportunity for international students to share their perspectives and cultural traditions with others in the university and in the community. The office also sponsors monthly coffee hours open to the university. Trips for international and exchange students to Niagara Falls and Washington, D.C., are arranged and partially funded through OIA.

International Exchange and Study Abroad Programs

Through the OIA, IUP students may broaden their education by taking part in study abroad programs.

The office houses an exchange/study abroad resource library. Students seeking information on academic programs offered by educational institutions in this country and abroad are welcome to read the materials available in the office. Qualified students planning to travel or study abroad may also purchase the International Student Identity Card—good for discounts, identification, and insurance—in the Office of International Affairs.

More information about each of the following programs and programs instituted after the date of this publication can be obtained in the Office of International Affairs, 120 Gordon Hall, 724-357-2295.

Bangladesh, Dhaka. Students studying business, computer science, economics, environmental studies, sociology, anthropology, and public administration have the opportunity to study for a semester or an academic year at North South University in Dhaka. The language of instruction is English.

Belize, Belize City. Students interested in Caribbean culture have the opportunity to study for one semester or an academic year at the University College of Belize in Belize. Courses will be primarily in business, humanities, social sciences, and natural sciences and mathematics. The language of instruction is English.

China, Chengdu. Students studying in the Eberly College of Business and Information Technology have the opportunity to study for one semester or an academic year at the Southwestern University of Finance and Economics. Language of instruction is Chinese.

Colombia, Bogota. Students with Spanish fluency interested in Colombian culture have the opportunity to study for one semester or an academic year at the Universidad de Los Andes. Courses are offered in business and social science.

Costa Rica, Heredia. A four-week intensive Spanish language program is offered in the summer at the National University of Costa Rica. For details and brochures, contact the Spanish and Classical Languages Department.

Croatia, Zagreb. Students studying in the College of Fine Arts have the opportunity to study for one semester or an academic year at the Academy of Fine Arts and the Academy of Music at the University of Zagreb.

Egypt, Cairo. Students majoring in education, language, commerce, the arts and sciences, and the humanities and social sciences may study for a semester or an academic year at Ain Shams University. The language of instruction is English.

England, Bristol. Students wishing to enroll in courses in the areas of economics, politics, sociology, history, and European social studies may study during the fall semester at the University of the West of England, Bristol.

England, Greenwich. Students studying teacher education for preparation as elementary, early childhood, or physical education teachers are eligible to study at the University of Greenwich for one semester. (Some secondary certification programs are available.)

England, Oxford. A three-week educational and cross-cultural experience is offered in the summer at Oxford University.

England, Sheffield. Students studying business have the opportunity to study for a semester or academic year at Sheffield Hallam University. Interest in other academic areas may be explored.

England, Worcester. Students are offered an opportunity to study at Worcester College of Higher Education for one semester or an academic year. Courses are offered in a variety of fields of study.

Finland, Tampere. Students studying business or occupational safety are eligible to study at Tampere University of Technology for a semester or academic year. The language of instruction is English.

France, Nancy. The opportunity to study for one semester or academic year at the University of Nancy II (140 miles from Paris) is available to qualified students. The language of instruction is French. For details, contact the French and German Department.

France, Nancy (summer). Two programs, one for English-speaking and one for French-speaking participants, are offered in the summer.

Germany, Duisburg. A semester or academic year program at the University of Duisburg is available to qualified students who possess the required German language competency. Courses are offered in German language, literature, culture, business, and natural sciences. The language of instruction is German. For further information, contact the French and German Department.

Germany, Leipzig. Graduate students in business may study one semester at the Leipzig Graduate School of Management of the University of Leipzig. M.B.A courses are offered in all fields of business administration and economics. Advanced undergraduates with high GPAs may be considered. Most courses are taught in German.

Germany, Nurnberg. Students studying in the Eberly College of Business and Information Technology have the opportunity to study for one semester or an academic year at the Nurnberg University of Applied Sciences.

Greece, Thessaloniki. Undergraduate students looking for a great all-around, European study abroad experience can travel to American College of Thessaloniki (ACT) for one semester or one academic year. Classes are available for all majors, and the language of instruction is English. An American-sponsored, private, nonprofit educational institution founded in 1886, ACT closely resembles a traditional New England college. Thessaloniki combines both city and village-like atmosphere for an incredible experience!

Hungary, Pecs. Students interested in Hungarian culture have the opportunity to study abroad for a semester or academic year at Janus Pannonius University. Courses are offered in the following areas: history of East-Central Europe, political development, economic reform, social change, arts and culture, and Central European studies. The language of instruction is English.

Italy, Torino. Looking for an opportunity to learn more about Italy than pasta and biscotti? Check out this great opportunity for graduate and undergraduate students studying business administration and economics or other related fields. Study at Universita Degli Studi di Torino, Scuola di Amministrazione Aziendale (SAA) for one or two semesters. The languages of instruction are Italian and English.

Japan, Osaka. The opportunity to study for a semester or one academic year at Kansai Gaidai University is available to students interested in Japanese culture. A variety of courses are offered in the Asian Studies Program. The language of instruction is English.

Jordan, Amman. Students interested in Jordanian culture have the opportunity to study for a semester or an academic year at the University of Jordan. Courses are offered in business management, accounting, nursing, language, education, and humanities.

Jordan, Irbid. Students interested in Jordanian culture may also study at Yarmouk University for a semester or academic year or may take intensive Arabic courses during the summer. Courses are offered in Arabic language, business, and political science.

Kenya, Eldoret. Students studying in the College of Education and Educational Technology have the opportunity to study for one semester or an academic year at Moi University in Kenya.

Republic of Korea, Chonnam. Students interested in Korean culture can study at Chodang University for a semester or an academic year. The program is open to all majors and courses are offered across the curriculum. The language of instruction is English.

Mexico, Cuernavaca. Students who are studying Spanish and have an interest in experiencing Mexican culture have an opportunity to participate in a summer study program that is offered at the Center for Bilingual and Multicultural Studies, an affiliate of the University of Morelos. For details and brochures, contact the Spanish and Classical Languages Department.

Mexico, Puebla. Students wishing to enroll in courses in Spanish, business, international relations/studies, anthropology, and hotel and restaurant management with an interest in Mexican culture have the opportunity to study at the Universidad de las Americas, Puebla, for one semester or academic year. The language of instruction is Spanish.

Philippines, Mindanao. Students interested in another culture have an opportunity to study for one semester or an academic year at Mindanao State University-Iligan Institute of Technology in the Philippines. Courses will be offered in engineering, natural sciences, information technology, social sciences and arts and humanities. The language of instruction is English.

Poland, Poznan. Students studying chemistry, criminology, English, industrial and labor relations, journalism, physics, psychology, and teacher education have the opportunity to study for a semester or an academic year at Adam Mickiewicz University in Poznan. The language of instruction is Polish; however, some courses are offered in English.

Russian Federation, Vladivostock. Students interested in Russian and/or Caucasian culture have the opportunity to study in the Republic of North Ossetia, located in the Caucasus Mountains of southern Russia. IUP students may study at North Ossetia State University for a semester or academic year. Courses are offered in archaeology, business and economics, education, fine arts, humanities and social sciences, and natural sciences and mathematics.

Slovaki Republic, Bratislava. Courses in Slovak language, Slovak literature, culture, and history, English literature, English culture and history, political science, sociology, physics, and psychology are available to interested students at Comenius University. The program is for one semester or an academic year.

Slovenia, Ljubljana. Students studying in the College of Fine Arts have the opportunity to study for one semester or an academic year at the Academy of Fine Arts and the Academy of Music at the University of Ljubljana.

Spain, Barcelona. Juniors and seniors, fluent in Spanish, with an interest in experiencing Spanish culture, have an opportunity to enroll in management, marketing, and tourism classes at Escuela Superior de Marketing I Administration. The language of instruction is Spanish.

Spain, Valladolid. Students who have completed twelve university credits in Spanish and have an interest in experiencing Spain's culture have an opportunity to participate in the Pennsylvania Valladolid Study in Spain Program during the spring semester. This experience will enable students to spend a period of twenty weeks immersed in Spanish culture and language at the University of Valladolid. For details and brochures, contact the Department of Spanish and Classical Languages.

Sweden, Karlstad. Students wishing to enroll in geography and tourism courses with a desire to experience Swedish culture are invited to study at the University of Karlstad. The language of instruction is English.

Turkey, Ankara. Students studying in the colleges of Education and Educational Technology, Humanities and Social Sciences, and Natural Sciences and Mathematics have the opportunity to study for one semester or an academic year at Middle Eastern Technical University in Ankara. Courses are taught in Turkish and English.

Zimbabwe, Harare. Students studying in the biological sciences have the opportunity to study for one semester or an academic year at the University of Zimbabwe.

International Student Exchange Program

The International Student Exchange Program offers a wide range of educational and cultural experiences for one semester or academic year for participants at over one hundred institutions in thirty-five different countries. (Summer and longer exchanges are also possible.) If you do not speak a foreign language, you still have many sites in which the language of instruction is English. If you do speak a foreign language, you have even more options.

National Student Exchange

Under this program, IUP is part of a national university network that enables our undergraduate students to study for up to one academic year at any of over one hundred seventy-one colleges and universities. In addition, this exchange of students enables IUP students to enroll at any of these universities without having to pay out-of-state, nonresident tuition fees. While on exchange, students have the opportunity to experience a different learning environment, to broaden social and cultural awareness, and to live in another part of the United States. (Alaska, Canada, Guam, Hawaii, Puerto Rico, and the Virgin Islands are included.) Study abroad sites are also available.

International Student Teaching Opportunities

IUP students enrolled as teacher education majors in all certification areas are eligible to participate in this half-semester student teaching program in the following areas: Copenhagen, Denmark; London, England; Worcester, England; Paris, France; Malahide, Ireland; and Gronigen, The Netherlands. See the College of Education and Educational Technology section of this catalog for further information.

Internships/Cooperative Learning

Many departments of the university have developed internship/cooperative education programs which allow a student to participate in university-supervised work experiences for variable academic credit. Internships/co-ops are viewed as an integral part of a student's academic preparation. An internship/co-op gives the student an opportunity to apply theoretical and philosophical tenets of a discipline in a practical job experience related to the student's academic program.

For general information about university internships, co-ops, and placement options, the students should consult the Experiential Education Program or their department internship co-op coordinator.

Experiential Education Office

Website: *http://www.iup.edu/internships*

The Harrisburg Internship Semester (T.H.I.S.)

The Harrisburg Internship Semester is available to an exceptional student from any IUP major for the fall or spring semester. The program provides a semester-long experience at the policymaking level in the executive or legislative branches of state government as well as independent boards, agencies, or commissions. Students will earn 15 semester hours.

Requirements for eligibility are 57 or more earned semester hours and an overall GPA of at least 3.0. Applicants must also submit a sample of their writing skills which must be a copy of an IUP writing assignment that has been graded by an instructor.

T.H.I.S. consists of an internship with a research project for 12 semester hours and an academic seminar for 3 semester hours. The program is directed by a State System faculty member elected to direct the program in Harrisburg. The faculty member will be the site supervisor and teach the seminar course. Grades and credits will be recorded on the students' academic progress reports at IUP. See the course descriptions under UNWD 480 and UNWD 493.

Housing with kitchenette is arranged through The Harrisburg Internship Semester Program at minimal cost to students. Students must first pay IUP tuition, room, and board and then be partially reimbursed via a biweekly paycheck during the semester. Students are responsible for their own transportation costs between their home and Harrisburg.

T.H.I.S. is offered through the Experiential Education Program in conjunction with the academic department of the successful candidate. Applications are submitted to the Experiential Education Office, Sutton Hall. Deadline for submission for fall is March 1; the spring semester deadline is October 1.

Eberly College of Business and Information Technology

Robert C. Camp, Dean
Manmohan D. Chaubey, Associate Dean
Website: *http://www.iup.edu/business*

In the spring of 1994, the College of Business was renamed to commemorate the generous commitment of the Eberly family through the Eberly Family Trust to the developmental needs of the college. Departments within the Eberly College of Business and Information Technology include Accounting, Finance and Legal Studies, Management, Management Information Systems and Decision Sciences, Marketing, and Technology Support and Training.

Mission Statement

The paramount mission of the college is to provide a broad range of high-value undergraduate and graduate business programs for students seeking preparation for professional careers in business and business education and in nonprofit organizations. The college is especially committed to high-quality instruction. In addition, the college is committed to research activities which enhance the quality of instruction and contribute to the literature of businesses and to service activities which enhance the economic vitality of the region and provide linkages and opportunities for involvement of faculty and students with the business community.

A learning environment that includes opportunities for real-world exposure will be provided by the college. Students will be exposed to instructors with industry/consulting experience and will have opportunities for real-world exposure through well-developed internship and outreach programs.

The college will provide opportunities for cross-cultural exposure to all students. This will be achieved by the recruitment of a diverse student body, maintenance of a faculty with diverse cultural backgrounds, and provision of cross-cultural educational opportunities through a network of international exchange partners.

Students will be exposed to the latest information technology. The college will provide a high-tech, multimedia learning environment and student connections to the latest global information bank.

Vision Statement

The Eberly College of Business and Information Technology will be clearly recognized as having one of the premier business programs in the Commonwealth of Pennsylvania and surrounding states. This will be evidenced by the quality and breadth of its educational programs, the scholarly productivity of its faculty, and its service contributions to the regional business community.

AACSB International Accreditation

AACSB International – The Association to Advance Collegiate Schools of Business has accredited the undergraduate and graduate business degree programs offered by the Eberly College of Business and Information Technology. Accreditation shows that a school fulfills its mission, meets its objectives, and maintains the high standards set by AACSB International. The outcome is managers who know how to think, communicate, solve problems, and provide leadership in the global marketplace.

College Majors and Concentrations

Accounting
Business (Associate of Arts)
Business Education
Business Technology Support
Finance
Human Resource Management
International Business
Management with concentrations in Industrial Management, General Management, or Entrepreneurship and Small Business Management

Management Information Systems
Marketing

The Bachelor of Science degree is offered in Accounting, Business Technology Support, Human Resource Management Finance, Management Information Systems, Management, and Marketing. The Technology Support and Training Department offers the Bachelor of Science in Education degree with a Business Education major. Two-year Associate of Arts degrees in Business with a concentration in Computers and Office Information Systems or in Business specializing in Accounting are also offered at the Indiana campus.

Bachelor of Science Degree

For those pursuing the Bachelor of Science degree, IUP's training will provide a broad liberal background in the behavioral sciences; a keen perception of the socioeconomic world in which we live and work; a foundation of general professional education for personally fruitful and socially useful careers in the varied fields of business; and an opportunity to obtain the specialized knowledge and skills essential to future occupational growth and advancement. There are eight Bachelor of Science degrees offered in business—Accounting, Business Technology Support, Finance, Human Resource Management, International Business, Management, Management Information Systems, and Marketing. Each program includes a variety of business and business-related courses which are designed to enrich the student's understanding of the modern business system.

A student may not pursue coursework in the Eberly College of Business and Information Technology with the expectation of graduating from the college unless he/she has been accepted as a degree candidate in the college.

Enrollment in all Eberly College of Business and Information Technology courses at the 300 and 400 level is restricted to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

Eberly College of Business and Information Technology students may, in consultation with their advisors, plan their program of study to obtain a minor in an area of business specialization other than their major or a related area outside the Eberly College of Business and Information Technology.

Bachelor of Science in Education Degree

The college seeks to serve the needs of its students and the needs of business, industry, and education through its diverse programs. The Bachelor of Science in Education with a Business Education major is designed to prepare teachers for comprehensive high schools, area vocational-technical schools, and community colleges.

Associate of Arts Degree

Students who desire a two-year program that prepares them to enter the business world may elect to pursue the Associate of Arts degree program in Business specializing in Computer and Office Information Systems or the Associate of Arts degree program in Business specializing in Accounting.

Eberly College of Business and Information Technology Academic Policies

Junior Standing

To be accepted for Junior Standing a business major must have:

- Accumulated 57 semester hours or more of academic credit
- Achieved a minimum 2.0 cumulative GPA
- Successfully completed the following courses: ACCT 201, ACCT 202, BLAW 235, BTED/COSC/IFMG 101, ECON 121, ECON 122, ENGL 101, ENGL 202, MATH 121, MATH 214, PSYC 101, and QBUS 215.

Business majors (except those majoring in Business Education) who have not achieved Junior Standing are normally not permitted to enroll in 300- or 400-level courses in the Eberly College of Business and Information Technology. Those who have at least 57 semester hours with a 2.0 or better cumulative GPA but who have not completed one or more of the required courses listed above may, with permission, enroll on a one-time-only basis in up to 9 semester hours of 300-level Eberly College of Business and Information Technology courses.

Distribution Requirement

All Eberly College of Business and Information Technology majors (except those majoring in Business Education) must take a minimum of 50 percent of their degree requirements (i.e., at least 62 semester hours) in non-business* coursework.

Residency Requirement

All Eberly College of Business and Information Technology majors (except those majoring in Business Education) must take a minimum of 50 percent of their required business* credit hours in IUP coursework. IUP credits earned by examination such as CLEP are counted toward IUP residency.

Restriction for Non-Business Majors

Students not majoring in business may count a maximum of 30 semester hours in business* coursework toward the 124-semester-hour-degree minimum. Business credits in excess of 30 will be permitted only as credits beyond the 124 for graduation.

*For purposes of all policies above, "business" coursework consists of all Eberly College of Business and Information Technology courses except IFMG 101, QBUS 215, and courses in Business Education (BTED). ECON 334 is also treated as a "business" course. "Non-business" coursework consists of all BTED courses, IFMG 101, QBUS 215, and all non-Eberly College of Business and Information Technology courses except ECON 334.

Office of Academic Services

This office provides academic assistance to lower-division and probationary students. The staff includes student peer advisors and is directed by the associate dean of the Eberly College of Business and Information Technology. Peer advisors are available to answer questions on the processes related to registration, change of major, removal of incompletes, grade appeals, etc.

The Office of Academic Services also houses the internship coordinator for the Eberly College of Business and Information Technology. IUP offers one of the largest business internships in Pennsylvania. Students can choose from a wide range of organizations to gain real-world experience while earning academic credit. The internship coordinator counsels students regarding internship prerequisites, procurement of the internship position, and scheduling to maximum benefit.

School of International Management

With the increasing demand for cross-cultural knowledge and international competence, Eberly College of Business and Information Technology has committed itself to a comprehensive strategy of providing future business leaders with a global foundation so they may become the world-class managers of tomorrow. The School of International Management offers a rich program that will strengthen business students and provide regional businesses with personnel who have a global perspective and internationally competitive management skills. This global perspective is provided to our students through broad exposure to cross-cultural coursework, integration of international concepts in selected business courses, direct exposure to individuals from other cultures, and a period of residency in another country.

Business Advisory Council

The Eberly College's Business Advisory Council is a select group of more than a hundred business leaders. The council helps the college in its educational and service mission through counsel and feedback on matters such as program objectives, curriculum development, program development and promotion, and recruitment and retention of students and faculty.

Service Units

The **Management Services Group** is a confederation of consulting units instituted in 1991 by the Eberly College of Business and Information Technology in support of ongoing and start-up businesses in the Indiana county region. An integral objective of the group is to provide educational opportunities through an ongoing schedule of seminars and workshops for local businesses.

The **Indiana County Small Business Incubator** was established in 1986 as a joint effort between IUP, the Indiana County commissioners, and several county and state agencies. The Ben Franklin Partnership has provided operational capital and other support services since the incubator's inception. The incubator provides small start-up business with consultation, services, and space.

The **Small Business Institute (SBI)** was established to assist existing small businesses with various types of problem resolution. Through the SBI, undergraduate and graduate business students work under close supervision of faculty members to assist clients with accounting systems, market studies, computer system installation, business planning, and operations management.

The **Government Contract Assistance Program** helps area businesses identify and respond to federal and state requests for bids for products and services. The program is funded by the Department of Defense. Contract sales generated through this program add to the vitality of the local economy.

The **Center for Family Business** was designed to serve the unique needs of family-owned businesses. Issues such as performance compensation, establishment of an effective corporate board, conflict resolution, management of siblings and cousin teams, succession, and estate planning are critically important and virtually ignored by other educational forums. The center provides an educational program consisting of four meetings per year which focus on the topics outlined above.

Department of Accounting

Germaine P. Kline, Chairperson; Anderson, Bradwick, Ghobashy, Hyder, Joseph, Kline, Ponko, Pressly, Rahman, Robbins, Woan, Yerep

Website: *http://www.iup.edu/accounting*

The Accounting Department provides the training necessary for one to enter the fields of public accounting, managerial accounting, and governmental accounting.

Bachelor of Science—Accounting

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54-56**
Mathematics: MATH 121
Social Science: ECON 121, PSYC 101
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with ACCT prefix

College: Business Administration Core **33**
Required Courses:

ACCT 201	Accounting Principles I	3sh
ACCT 202	Accounting Principles II	3sh
BLAW 235	Legal Environment of Business	3sh
BTST 321	Business and Interpersonal Comm	3sh
FIN 310	Finance I	3sh
IFMG 300	Info Systems: Theory and Practice	3sh
MGMT 310	Principles of Management	3sh
MGMT 330	Production and Operations Management	3sh
MGMT 495	Business Policy	3sh
MKTG 320	Principles of Marketing	3sh
QBUS 215	Business Statistics	3sh

Major: Accounting (1) **27**
Required Courses:

ACCT 301	Intermediate Accounting I	3sh
ACCT 302	Intermediate Accounting II	3sh
ACCT 311	Cost Accounting	3sh
ACCT 321	Federal Taxes	3sh
ACCT 401	Advanced Accounting	3sh
ACCT 412	Advanced Cost Accounting	3sh
ACCT 431	Auditing	3sh

Controlled Electives:
Two courses from this list: 6sh
ACCT 422, 435, 441, 451, 461, 471, BLAW 336

Other Requirements: **0**

Free Electives: **8-10**

Total Degree Requirements: **124**

(1) Students must meet the grade prerequisite(s) listed in the course description section of this catalog prior to advancing to the next course.

Associate of Arts in Business Specializing in Accounting

The Associate of Arts in Business Specializing in Accounting is designed with these objectives:

- To provide business occupational education with the opportunity for specialization in the accounting area
- To enable the student to enter accounting positions in business and government
- To enable the student to upgrade his/her skills and knowledge to qualify for higher positions in business and government

After successfully completing the program, the student may apply for admission into a four-year baccalaureate program. Admission is not guaranteed. If accepted, all of the semester hours earned in the associate program will qualify towards the four-year degree program in accounting.

Associate of Arts—Business Specializing in Accounting

Liberal Studies: As outlined in the Liberal Studies **32-33**
Section with the following specifications:
English: ENGL 101, 202
Fine Arts: ARHI 101, DANC 102, MUHI 101, or THTR 101
Health and Wellness: 3sh
Humanities: 3sh
Mathematics: 3-4sh (1)
Natural Science: 4sh
Social Science: PSYC 101
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122

Business Requirements **27**
Required Courses:

ACCT 201	Accounting Principles I	3sh
ACCT 202	Accounting Principles II	3sh
ACCT 301	Intermediate Accounting I	3sh
ACCT 302	Intermediate Accounting II	3sh
ACCT 311	Cost Accounting	3sh
BLAW 235	Legal Environment of Business	3sh
MGMT 310	Principles of Management	3sh
MKTG 320	Principles of Marketing	3sh
Select one of the following:		3sh
ACCT 321	Federal Taxes	
BTST 321	Business and Interpersonal Communications	
IFMG 300	Information Systems: Theory and Practice	

Free Electives: **3**

Total Degree Requirements: **62-63**

(1) MATH 121 is acceptable in fulfilling four-year accounting degree curriculum requirements.

Department of Finance and Legal Studies

Ibrahim J. Allanch, Chairperson; Ames, Boldin, Chaudhry, Eastman, Gart, Grigsby, Ray, Troxell, Welker

Website: *http://www.iup.edu/financelegal*

Finance Major

The Finance major, leading to the degree of Bachelor of Science, is designed to prepare students for careers in financial management and in the financial services industry, which includes insurance, investments, and banking. In particular, students are prepared to deal with financial problem solving and investment analysis.

Legal Studies

Legal Studies offers law and law-related courses with special emphasis on business applications. Legal Studies provides the student with a broad legal and ethical foundation necessary to a career in business or as preparation for pursuit of a law or law-related career.

Bachelor of Science—Finance

Liberal Studies: As outlined in Liberal Studies section with the following specifications:		54-56
Mathematics: MATH 121		
Social Science: ECON 121, PSYC 101		
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with FIN prefix		
College: Business Administration Core		33
Required Courses:		
ACCT 201	Accounting Principles I	3sh
ACCT 202	Accounting Principles II	3sh
BLAW 235	Legal Environment of Business	3sh
BTST 321	Business and Interpersonal Comm	3sh
FIN 310	Finance I	3sh
IFMG 300	Info Systems: Theory and Practice	3sh
MGMT 310	Principles of Management	3sh
MGMT 330	Production and Operations Management	3sh
MGMT 495	Business Policy	3sh
MKTG 320	Principles of Marketing	3sh
QBUS 215	Business Statistics	3sh
Major: Finance		27
Required Courses:		
ECON 325	Monetary Economics I	3sh
FIN 320	Finance II	3sh
FIN 322	Life Insurance	3sh
FIN 324	Principles of Investments	3sh
FIN 420	Investment Analysis	3sh
FIN 422	Seminar in Finance	3sh
Controlled Electives:		
Three courses from the following: ACCT 321, ECON 326, 334, 345, 356, FIN 312, 355, 385, 410, 424, QBUS 380		9sh
Other Requirements:		0
Free Electives:		8-10
Total Degree Requirements:		124

Pre-Law Track in Business

The Pre-Law track is intended for the student who is a business major concentrating in one of the business areas and interested in law as a career. The pre-law track consists of 21 semester hours selected by the student from a predetermined list of courses spread over six areas of Humanities and Social Sciences. The goals of this track are academic accomplishment, guidance, and advisement. Interested business students should contact the pre-law advisor in the Finance and Legal Studies Department.

Bachelor of Science—Business/Pre-Law Track(1)

Liberal Studies: As outlined in Liberal Studies section with the following specifications:		54-56
Mathematics: MATH 121		
Social Science: ECON 121, PSYC 101		
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with major prefix		
College: Business Administration Core		33
Required Courses:		
ACCT 201	Accounting Principles I	3sh
ACCT 202	Accounting Principles II	3sh
BLAW 235	Legal Environment of Business	3sh
BTST 321	Business and Interpersonal Comm	3sh
FIN 310	Finance I	3sh
IFMG 300	Info Systems: Theory and Practice	3sh
MGMT 310	Principles of Management	3sh
MGMT 330	Production and Operations Management	3sh
MGMT 495	Business Policy	3sh
MKTG 320	Principles of Marketing	3sh
QBUS 215	Business Statistics	3sh
Major: One Major in Business Administration Areas (1)		27
Accounting Major		
Business Technology Support Major		
Finance Major		
Human Resources Management Major		
Management Major/Industrial Management Track		
Management Major/International Business		
Management Major/General Management Track		
Management Major/Entrepreneurship and Small Business Track		
Management Information Systems Major		
Marketing Major		
Pre-Law Interdisciplinary Program for Business		9-21
Seven courses, with at least one course from six areas		
Criminology: CRIM 210, 260, 357		
Economics: ECON 121, 122, 332		
English: ENGL 212, 220, 310		
History: HIST 320, 321, 346		
Philosophy: PHIL 101, 222, 450		
Political Science: PLSC 358, 359, 361		
Free Electives:		0-1
(#) Total Degree Requirements:		124-125

(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

(1) This program is the generic outline for the pre-law program with any of the listed Eberly College of Business and Information Technology majors.

Department of Management

Prashanth B. Nagendra, Chairperson; Ali, Anderson, Ashamalla, Falcone, Gibbs, Mohamed, Orife, Osborne, Ryan, Slack, Soni, Wisnieski; and professors emeriti McGovern, Stevenson

Website: *http://www.iup.edu/management*

Graduates holding the Bachelor of Science degree in Management (Industrial, General, Entrepreneurship and Small Business Management), Human Resource Management, or International Business may find employment opportunities in both the public and private sectors. Opportunities are expected to be especially plentiful in the services sector (e.g., retailing, health care, information technology, finance, and transportation) where these degrees will be especially valuable.

The Bachelor of Science in Management program offers three concentrations: Industrial Management, General Management, and Entrepreneurship and Small Business Management. Students in the Industrial Management concentration are well grounded in both management theory and application, but their focus is more upon production, operations, quality, inventory, and capacity management. The concentration in General Management is distinguished by its greater

flexibility that can be useful to the student who wishes to design a customized management specialization. Students taking the Entrepreneurship and Small Business Management concentration will focus on creation and operation of a small business. This concentration might also be desirable for graduates who will be working in small businesses where the manager often must wear several hats.

The Bachelor of Science in Human Resource Management prepares individuals in both the theoretical and applied aspects of managing the human resources function in organizations as a generalist or specialist. Students will gain expertise in areas such as job design, staffing, training, compensation, and performance appraisal.

The Bachelor of Science in International Business offers students an opportunity to acquire a thorough understanding of managing global operations in the contemporary business environment. In addition, students develop skills in a traditional functional area. The combination of these two objectives enable students to successfully perform in today's competitive global economy.

Bachelor of Science—Management

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-56
Mathematics: MATH 121
Social Science: ECON 121, PSYC 101
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with MGMT prefix

College: Business Administration Core 33
Required Courses:

ACCT 201	Accounting Principles I	3sh
ACCT 202	Accounting Principles II	3sh
BLAW 235	Legal Environment of Business	3sh
BTST 321	Business and Interpersonal Comm	3sh
FIN 310	Finance I	3sh
IFMG 300	Info Systems: Theory and Practice	3sh
MGMT 310	Principles of Management	3sh
MGMT 330	Production and Operations Mgmt	3sh
MGMT 495	Business Policy	3sh
MKTG 320	Principles of Marketing	3sh
QBUS 215	Business Statistics	3sh

Major: Concentration 27

Industrial Management Concentration
Required Courses:

ACCT 300	Managerial Accounting	3sh (1)
MGMT 300	Human Resource Management	3sh
MGMT 428	Seminar in Management	3sh

Controlled Electives: (2)

One course from list: COSC 110 or IFMG 251	3sh
Two courses from two areas on list: MGMT 402 or ILR 480, MGMT 401 or 400, ACCT 311	6sh
Three courses from list or additional electives from above: BLAW 336, ECON 371, ECON 372, ENGL 310 or JRNL 326, FIN 320, MGMT 481, MGMT 490, MGMT 493(3sh max), MKTG 420, QBUS 380, SAFE 101	9sh

General Management Concentration
Required Courses:

ACCT 300	Managerial Accounting	3sh (1)
MGMT 300	Human Resource Management	3sh
MGMT 428	Seminar in Management	3sh

Controlled Electives:

Two advanced Business electives: 300/400 level courses	6sh (3)
Two advanced Economic electives: 300/400 level courses	6sh
Two other advanced electives: 300/400 level courses	6sh

Entrepreneurship and Small Business Management Concentration
Required Courses:

ACCT 300	Managerial Accounting	3sh
MGMT 275	Introduction to Entrepreneurship	3sh
MGMT 325	Small Business Management	3sh
MGMT 403	Small Business Planning	3sh
MGMT 492	Small Busn/Entrepreneurship Internship	6sh
Major Area Restricted Electives:		9sh

Other Requirements: 0
Free Electives: 8-10
Total Degree Requirements: 124

(1) ACCT 301 may be substituted.
(2) Note prerequisites for controlled electives in planning sequence.
(3) Only one MGMT and/or one ACCT course may be included in this category.

Bachelor of Science—Human Resources Management

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-56
Mathematics: MATH 121
Social Science: ECON 121, PSYC 101
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with MGMT prefix

College: Business Administration Core 33
Required Courses:

ACCT 201	Accounting Principles I	3sh
ACCT 202	Accounting Principles II	3sh
BLAW 235	Legal Environment of Business	3sh
BTST 321	Business and Interpersonal Comm	3sh
FIN 310	Finance I	3sh
IFMG 300	Info Systems: Theory and Practice	3sh
MGMT 310	Principles of Management	3sh
MGMT 330	Production and Operations Mgmt	3sh
MGMT 495	Business Policy	3sh
MKTG 320	Principles of Marketing	3sh
QBUS 215	Business Statistics	3sh

Major: Human Resource Management 27
Required Courses:

ACCT 300	Managerial Accounting	3sh (1)
MGMT 300	Human Resource Management	3sh
MGMT 400	Compensation Management	3sh
MGMT 428	Seminar in Management	3sh

Controlled Electives:

One course from list: ECON 330 or PSYC 390	3sh
One course from list: MGMT 401 or MGMT 402	3sh
Three courses from list: ECON 371, ECON 372, ECON 373, ENGL 310, ENGL 312, JN326, ILR 426, ILR 480, MGMT 311, MGMT 493(3sh max), ECON 330 or PSYC 371, PSYC 390 (if not above), SOC 340	9sh (2)

Other Requirements: 0
Free Electives: 8-10
Total Degree Requirements: 124

(1) ACCT 301 may be substituted.
(2) Note prerequisites for controlled electives in planning sequence.

Bachelor of Science—International Business

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-56
Mathematics: MATH 121
Humanities: PHIL 222
Social Science: ECON 121, PSYC 101, ANTH 110/ANTH 211/GEOG 104/PLSC 101
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with prefix of concentration area

College: Business Administration Core 33
Required Courses:

ACCT 201	Accounting Principles I	3sh
ACCT 202	Accounting Principles II	3sh
BLAW 235	Legal Environment of Business	3sh
BTST 321	Business and Interpersonal Comm	3sh
FIN 310	Finance I	3sh
IFMG 300	Info Systems: Theory and Practice	3sh

MGMT 310	Principles of Management	3sh	
MGMT 330	Production and Operations Mgmt	3sh	
MGMT 495	Business Policy	3sh	
MKTG 320	Principles of Marketing	3sh	
QBUS 215	Business Statistics	3sh	
Foreign Language Requirement (1)			0-9
Foreign Residency Requirement (2)			
Major: International Business			
Required Courses:			12
ECON 345	International Trade	3sh	
MGMT/MKTG 350	International Business	3sh	
MGMT 454	International Competitiveness	3sh	
MGMT 459	Seminar in International Management	3sh	
Concentration area courses: (select one concentration)			12
Finance Concentration:			
FIN 320	Finance II	3sh	
FIN 324	Principles of Investments	3sh	
FIN 410	Financial Institutions and Markets	3sh	
FIN 424	International Financial Management	3sh	
Human Resources Management Concentration:			
MGMT 300	Human Resources Management	3sh	
MGMT 400	Compensation Management	3sh	
MGMT 452	Comparative Management	3sh	
MGMT 402	Seminar in Human Resource Mgmt	3sh	
Marketing Concentration:			
MKTG 321	Consumer Behavior	3sh	
MKTG 420	Marketing Management	3sh	
MKTG 421	Marketing Research	3sh	
MKTG 430	International Marketing	3sh	
Free Electives:			4-6
Other Requirements:			0
Total Degree Requirements:			124

(1) Candidates must demonstrate a conversational proficiency in a foreign language. This requirement may be met by: (a) successful completion of 9 intermediate-level semester hours in a specific language, or (b) successful completion of an exemption or credit examination in lieu of the above. A foreign student, registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, can meet the foreign language requirement by successful completion of an exemption examination in the acquired native language.

(2) Candidates must document one semester of foreign residence (minimum of three months). Normally, the foreign residency requirement will be met in conjunction with a work experience, internship, or student exchange. A substitute cross-cultural experience may be permitted with the recommendation of the academic advisor. The foreign language requirement is a prerequisite to the foreign residency requirement.

Department of Management Information Systems and Decision Sciences

Louise B. Burky, Chairperson; Alhohali, Halapin, Lloyd, Nahouraii, Pierce, Rodger, Solak, Wibowo; and professors emeriti Shildt, Spencer

Website: *http://www.iup.edu/mis-desci*

Management Information Systems prepares students for careers in Computer Based Information Systems in organizational environments. Areas such as networking and user/manager involvement in the global business environment are integrated with the traditional skills of programming, analysis and design, database development, various architectures, and application development. Microprocessor technology, the mainframe environment, and client server applications are included. These adhere to standards for a balanced curriculum as promulgated by the Association for Information Systems (AIS), the technology accrediting arm of the American Assembly of Collegiate Schools of Business (AACSB).

Decision Sciences provides students with a knowledge of statistical and quantitative methods used to enhance the business decision process. The methodologies include linear programming, forecasting, simulation, stochastic process, queuing, and network models.

The department creates a learning process that instills in its graduates respect, integrity, excellence, and a commitment to lifelong learning. Internship experiences facilitate the student's entry into full time employment in a rapidly changing technological environment.

The department welcomes minors for students who are majoring in other business programs. The minor program offers other business majors a technical enhancement to their area of interest, a necessity for today's business manager.

Bachelor of Science—Management Information Systems (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			55-58
Mathematics: MATH 121			
Social Science: ECON 121, PSYC 101			
Liberal Studies Electives: BTED/COSC 101, ECON 122, MATH 214, no courses with IFMG prefix			
College: Business Administration Core			33
Required Courses:			
ACCT 201	Accounting Principles I	3sh	
ACCT 202	Accounting Principles II	3sh	
BLAW 235	Legal Environment of Business	3sh	
BTST 321	Business and Interpersonal Comm	3sh	
FIN 310	Finance I	3sh	
IFMG 300	Info Systems: Theory and Practice	3sh	
MGMT 310	Principles of Management	3sh	
MGMT 330	Production and Operations Mgmt	3sh	
MGMT 495	Business Policy	3sh	
MKTG 320	Principles of Marketing	3sh	
QBUS 215	Business Statistics	3sh	
Major: Management Information Systems			33
Required Courses:			
COSC 220	Applied Computer Programming	3sh	
IFMG 205	Foundations of MIS	3sh	
IFMG 350	Business Systems Technology	3sh	
IFMG/COSC 352	LAN Design and Installation	3sh	
IFMG 370	Advanced COBOL	3sh	
IFMG 450	Data Base Theory and Application	3sh	
IFMG 451	Systems Analysis	3sh	
IFMG 470	Systems Design	3sh	
Controlled Electives: (1)		9sh	
Select three from the following: COSC/IFMG 354, COSC 110, 300, 310, 345, 362, 444, IFMG 372, 382, 455, 480, 485, 493 (3sh max), QBUS 380, 401			
Other Requirements:			0
Free Electives:			0-3
Total Degree Requirements:			124

(*) Distribution Requirement: All Eberly College of Business and Information Technology majors (except those majoring in Business Education) must take a minimum of 50 percent of their degree requirements (i.e., at least 63sh) in non-business coursework.

(1) With advisor approval, one controlled elective may be selected from any other business course numbered 300 or higher that is not in the business core.

Minor—Management Information Systems 15

(for Business Majors in the Eberly College of Business and Information Technology only)

Required Courses:		
IFMG 205	Foundations of MIS	3sh
IFMG 251	Business Systems Analysis and Design	3sh
IFMG 300	Information Systems: Theory and Practice	3sh
Controlled Electives:		6sh
Select 6sh from any IFMG courses except IFMG 101 and 201.		

Department of Marketing

Krish S. Krishnan, Chairperson: Batra, Bebko, Garg, Sciulli, Sharma, Taiani, Weiers

Website: *http://www.iup.edu/marketing*

The Bachelor of Science in Marketing program is designed to prepare its majors for a wide range of careers in private and public sector marketing including sales, management, retailing, brand management, customer affairs, marketing research, public relations, and international marketing. The program focuses on integrating technical knowledge in all areas of marketing with analytical and communication skills to prepare the students for the challenges of the global competition in the twenty-first century.

Bachelor of Science—Marketing

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Mathematics:** MATH 121 **Social Science:** ECON 121, PSYC 101 **Liberal Studies Electives:** BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with MKTG prefix			**54-56**
College: Business Administration Core			**33**
Required Courses:			
ACCT 201	Accounting Principles I	3sh	
ACCT 202	Accounting Principles II	3sh	
BLAW 235	Legal Environment of Business	3sh	
BTST 321	Business and Interpersonal Comm	3sh	
FIN 310	Finance I	3sh	
IFMG 300	Info Systems: Theory and Practice	3sh	
MGMT 310	Principles of Management	3sh	
MGMT 330	Production and Operations Mgmt	3sh	
MGMT 495	Business Policy	3sh	
MKTG 320	Principles of Marketing	3sh	
QBUS 215	Business Statistics	3sh	
Major: Marketing			**27**
Required Courses:			
ACCT 300	Managerial Accounting	3sh	
MKTG 321	Consumer Behavior	3sh	
MKTG 420	Marketing Management	3sh	
MKTG 421	Marketing Research	3sh	
MKTG 422	Seminar in Marketing	3sh	
ECON —	Advanced Economics Elective: 300/400-level course	3sh	
Controlled Electives:			
Three courses from list: ECON 331, 345, MGMT/MKTG 350, MKTG 430, 431, 432, MKTG 433, 434, 435, 436, 437, 493 (3sh max)		9sh	
Other Requirements:			**0**
Free Electives:			**8-10**
Total Degree Requirements:			**124**

Department of Technology Support and Training

Wayne A. Moore, Chairperson; Brandenburg, Hemby, Kovacs, Lincecum, McPherson, C. Ray, Rowell, Szul, Woodland; and professors emeriti Beaumont, Bianco, Patterson Cordera, Mahan, Moreau, Morris, Polesky, Sheeder, Steigmann, Woomer

Website: *http://www.iup.edu/technologysupport*

This department offers the following degrees: Bachelor of Science in Education with a Business Education major, Bachelor of Science with a major in Business Technology Support, and a two-year Associate of Arts degree in Business with a Computer and Office Information Systems emphasis.

Business Technology Support Major (Bachelor of Science)

The Business Technology Support majors are equipped to be versatile professionals who "bridge the gap" between the developer of information technology systems and the typical users of computers. The program encompasses the knowledge, skills, and attitudes required of a professional who provides support to users of information technology to maintain and improve overall organizational effectiveness. The Business Technology Support program places emphasis on understanding how technology contributes to individual and work group performance and to behavioral factors, such as communications, ergonomics, training, and change.

The Business Technology Support curriculum is designed to challenge students to understand their dynamic role from both an organizational and individual viewpoint. Graduates of the program can pursue career paths such as office managers/supervisors, web site managers, technology trainers, help desk administrators, and documentation/curriculum developers as they relate to enterprise-wide solutions, support services, and technology training.

The department welcomes minors. A newly revised minor provides Business majors with the opportunity to complement their major with business technology support courses.

Business Education Major (Bachelor of Science in Education)

The IUP Business Education program is accredited by the National Council for Accreditation of Teacher Education (NCATE). The program leads to the degree of Bachelor of Science in Education and to certification in Pennsylvania as a business education teacher.

Our program in business education is dedicated to preparing teachers who will be qualified and certificated to instruct students to live and work in a business environment. The business education program recently (2000) received a national honor as the outstanding program in the nation by the Association for Career and Technology Education.

The major is intended for those interested in teaching in public junior and senior high schools, vocational-technical schools, private business schools, or industry. Students have a choice of the following certification areas: accounting, data processing, marketing, office technologies, secretarial, and marketing/distributive education. They must select two or more areas of certification; one of the two areas must be office technologies. Students seeking certification in marketing/distributive education must select the areas marketing and marketing/distributive education. The courses required in each area are as follows:

Secretarial: BTED 260*, 261*, 262* (Students can transfer credit from another regionally accredited institution.)
Accounting: ACCT 300, 301, 421
Office Technologies: BTED 250, BTST 301, 313, 400
Data Processing: BTST 310, IFMG 251, IFMG 255, BTED 312
Marketing: DEDU 331, MKTG 435, MKTG 436
Distributive Education: MKTG 421, MKTG 433, MKTG elective, DEDU 413**
*Students should transfer these courses from another Middle States-accredited institution or obtain credit by exam.
**Offered on an individualized basis.

A student must apply to the dean of the College of Education and Educational Technology to receive an initial certificate to teach in Pennsylvania's public schools. Certification to be a business education teacher is approved by the dean of the College of Education and Educational Technology when a student has met all the requirements in professional education, Liberal Studies, and business education major courses. Students must attain a 2.6 overall GPA in order to student teach. See details of the 3-Step Process in the section "Admission to Teacher Education and Certification" in the College of Education and Educational Technology section of this catalog. The candidate for certification must also complete successfully the core battery and specialization sections of the National Teachers' Examination.

All students who take a business education major also complete a track in the College of Education and Educational Technology and must meet the standards set by that college (see Department of Technology Support and Training Student Handbook, page 8).

Practical Business Experience

Before graduation, each business education student must document completion of 500 hours of secretarial practice, accounting practice, data processing, clerical practice, or office-related experience. This experience should be in the field or fields in which the student is contemplating certification and can be acquired during summer vacations and in offices on the campus during the regular school term. Previous documented experience may also be counted.

Bachelor of Science in Education—Business Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			53-55
Mathematics: BTED 111			
Social Sciences: ECON 121, PSYC 101			
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122, MATH 214			
College:			32
Professional Education Sequence:			
BTED 311	Methods and Evaluation in Business and Marketing Education I	3sh	
BTED 312	Methods and Evaluation in Business and Marketing Education II	3sh	
COMM 103	Digital Instructional Technology	3sh	
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2sh	
EDSP 102	Educational Psychology	3sh	
EDUC 242	Pre-student Teaching Clinical Exp I	1sh	
EDUC 342	Pre-student Teaching Clinical Exp II	1sh	
EDUC 441	Student Teaching	12sh	
EDUC 442	School Law	1sh	
FDED 102	American Ed in Theory and Practice	3sh	
Major:			45-48
Required Courses: Business Education Core			
ACCT 201	Accounting Principles I	3sh	
ACCT 202	Accounting Principles II	3sh	
BLAW 235	Legal Environment of Business	3sh	
BTED 132	Computer Keyboarding and Formatting	3sh	
BTST 101	Introduction to Business	3sh	
BTST 321	Business and Interpersonal Comm	3sh	
IFMG 300	Info Systems: Theory and Practice	3sh	
MKTG 320	Principles of Marketing	3sh	
Controlled Electives:			
Areas of Certification (1)		21-24sh	
Accounting: ACCT 300, 301, 421			
Data Processing: IFMG 205, 251, and one approved programming elective			
Distributive Education: DEDU 413, MKTG 421, 433, one MKTG elective (advisor approved)			
Marketing: DEDU 331, MKTG 435, MKTG 436			
Office Technologies: BTED 250, BTST 301, 313, 400			
Secretarial: BTED 260, 261, 262 (2)			
Other Requirements:			0
Free Electives:			0
(#) Total Degree Requirements:			130-132

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.

(1) According to Pennsylvania Commonwealth guidelines, students must be certified in office technologies and at least one other area (accounting, data processing, marketing, or secretarial). An exception to this is certification in marketing/distributive education.

(2) Students can transfer credit from another regionally accredited institution.

(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Bachelor of Science—Business Technology Support

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			55-58
Mathematics: MATH 121			
Social Sciences: ECON 121, PSYC 101			
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122, MATH 214.			
College:			33
Required Courses: Business Administration Core			
ACCT 201	Accounting Principles I	3sh	
ACCT 202	Accounting Principles II	3sh	
BLAW 235	Legal Environment of Business	3sh	
BTST 321	Business and Interpersonal Comm	3sh	
FIN 310	Finance I	3sh	
IFMG 300	Info Systems: Theory and Practice	3sh	
MGMT 310	Principles of Management	3sh	
MGMT 330	Production and Operations Mgmt	3sh	
MGMT 495	Business Policy	3sh	
MKTG 320	Principles of Marketing	3sh	
QBUS 215	Business Statistics	3sh	
Major:			33
Required Courses:			
BTST 301	Microcomputer Software Solutions	3sh	
BTST 310/w/	Telecommunications	3sh	
BTST 311	Traning Methods in Business and Information Technology Support	3sh	
BTST 313	Office Systems Technologies	3sh	
BTST 411	Microcomputer Support for OSYS	3sh	
BTST 413	Enterprise Technology Support	3sh	
BTST 480	Seminar in Business Technology Support	3sh	
COSC/IFMG 352	Computer Network Installation and Administration	3sh	
Controlled Electives: (select three of the following):		9sh	
BTED 201	Internet and Multimedia		
BTST 221	Business Technical Writing		
COSC 110	Problem Solving and Structured Programming		
COSC 304	Interactive Internet Programming with Java		
IFMG 251	Business Systems Analysis and Design		
BTST 402	Website Development and Administration		
BTST 493	Internship		
Other Requirements:			0
Non-Business Electives:			2-5
Total Degree Requirements:			126

Tech Prep

The Technology Support and Training Department has signed articulation agreements with high schools throughout Western Pennsylvania. Graduates of these approved programs have the opportunity to schedule advanced courses and develop higher-level skills to enhance employment options. For additional information, contact the department secretary at 724-357-3003.

Associate of Arts Degree

Offering specialization in computer and office information systems (COIS), the Associate of Arts Degree in Business is designed to be a two-year curriculum with these objectives:

1. To provide business occupational education with the opportunity for specialization in COIS.
2. To enable the student to enter COIS positions in business and government.
3. To enable the student to upgrade his/her skills and knowledge to qualify for higher positions in business and government.
4. To provide the foundation to continue education in a four-year degree program. This program is offered at the Indiana campus only.

Associate of Arts—Business-Computer and Office Information Systems Specialization

Liberal Studies: As follows: 31
English: ENGL 101
Fine Arts: one course from list
Humanities: HIST 195 and one course from LBST list of Philosophy and Religious Studies
Liberal Studies Electives: (1) BTED/COMM/COSC/IFMG/LIBR 201, COSC/IFMG 101, ECON 122
Math: BTED 111 or MATH 121
Social Science: PSYC 101 and one course from non-western cultures LBST Social Science list

Major: Business (Associate) Core 12
Required Courses:

ACCT 201	Accounting Principles I	3sh
ACCT 202	Accounting Principles II	3sh
BTST 101	Introduction to Business	3sh
BTST 221	Business Technical Writing	3sh

Other Requirements:
Computer and Office Specialization: 12

BTED 250	Electronic Office Procedures	3sh
BTED 273	Word Processing Applications	3sh
IFMG 205	Foundations of MIS	3sh
	Advisor-Approved Elective	3sh

Free Electives: 6
Other Requirements: 0
Total Degree Requirements: 61

(1) Students can not repeat the same prefix in this category.

Minor—Business Technology Support 15

(for Business Majors in the Eberly College of Business and Information Technology only)

Required Courses:

BTST 301	Microcomputer Software Solutions	3sh
BTST 310	Telecommunications	3sh
BTST 313	Office Systems Technologies	3sh
BTST 315	Records Administration	3sh
BTST 411	Microcomputer Support for OSYS	3sh

Business Minors for Eberly College of Business and Information Technology Students

Minors in Accounting, Finance, Human Resources Management, Management Information Systems, Marketing, and Business Technology Support are offered only for students who are majoring in one of the other majors in the Eberly College of Business and Information Technology and assume the common 36-semester-hour Business core.

Minor in Business Administration for Non-Business Majors

The Eberly College of Business and Information Technology offers, as a joint effort of its departments, a 21-semester-hour minor for non-business majors. The program is designed to give non-business majors a general background in business with 12 semester hours of prescribed Liberal Studies courses and 20 semester hours of required business courses.

Minor—Business Administration (for non-business majors) 21

Prescribed Liberal Studies:
Social Science: ECON 121
Mathematics: MATH 214 or 217
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122

Required Business Courses: 15

ACCT 201	Accounting Principles I	3sh
ACCT 202	Accounting Principles II	3sh
FIN 310	Finance I	3sh
MGMT 310	Principles of Management	3sh
MKTG 320	Principles of Marketing	3sh

Other Requirements: 6
Two of the following with advisement:

BLAW 235	Legal Environment of Business	3sh
BTST 321	Business and Interpersonal Comm	3sh
IFMG 300	Information Systems: Theory and Practice	3sh

College of Education and Educational Technology

John W. Butzow, Dean
Edward W. Nardi, Associate Dean for Academic Affairs
John R. Johnson, Associate Dean for Teacher Education
Lloyd Onyett, Assistant Dean for Information and Communications Technology

Website: *http://www.iup.edu/education*

Since its founding in 1875 as the Indiana Normal School, Indiana University of Pennsylvania has been widely recognized for its excellent programs in teacher education. Although the scope of the university has been greatly expanded, the College of Education and Educational Technology continues the tradition of preparing outstanding teachers to serve the students of the commonwealth and the nation.

The College of Education and Educational Technology comprises nine multidimensional departments which offer twenty-five programs leading to the bachelor, master, and doctoral degrees. Undergraduate programs prepare students in teacher education (elementary, early childhood, secondary, vocational, and special education), communications media, and rehabilitation. In addition, a diverse set of graduate programs, detailed in the *Graduate School Catalog*, meet the needs of practitioners in basic education, higher education, counseling, and communications media.

The departments in the college are Professional Studies in Education, Foundations of Education, Communications Media, Special Education and Clinical Services, Educational and School Psychology, Counselor Education, Student Affairs in Higher Education, Adult and Community Education, and the University School. Each department makes a unique contribution to the total preparation of students within the college. Some programs provide service courses to enhance the professional preparation of students; others, such as professional programs in teacher education, public school administration, and personnel services, lead to certification for public school teaching or supervision in the Commonwealth of Pennsylvania.

The college is well known for its opportunities to practice "hands-on" learning. Over five hundred students enjoy early field experiences each semester. In addition, the college places about six hundred student teachers each year in public schools which provide a full semester of supervised teaching experience. Students are encouraged to take advantage of a full range of activities offered in urban, rural, and multicultural settings.

Practical experiences are important for students majoring in communications media and rehabilitation as well. Students in these programs are prepared in one of the largest internship programs in Pennsylvania. They select supervised work experiences with agencies throughout the commonwealth and neighboring states; many students are so successful in their internship placements, they are hired immediately upon graduation.

Summary of Certification Programs Offered

Bachelor of Science in Education (B.S.Ed. with certification)
- **Elementary Education**
- **Early Childhood Education**
- **Secondary Education**
  - **English, French, German, Social Science, Spanish** *(for details, see the College of Humanities and Social Sciences)*
  - **Biology, Chemistry, Earth and Space Science, General Science, Mathematics, Physics** *(for details, see the College of Natural Sciences and Mathematics)*
  - **Health and Physical Education, Family and Consumer Sciences Education (Home Economics)** *(for details, see the College of Health and Human Services)*
  - **Art, Music** *(for details, see the College of Fine Arts)*
  - **Business** *(for details, see the Eberly College of Business and Information Technology)*
- **Special Education**
  - **Speech-Language Pathology and Audiology**
  - **Education of Exceptional Persons**
    - **Education of Persons with Hearing Loss**

Vocational/Technical Education *(for details, see the School of Continuing Education)*

Bachelor of Science Degree (B.S.)
Rehabilitation
Communications Media

Graduate Programs (See the *Graduate School Catalog*)

Master's Degree (M.Ed. unless otherwise noted): Adult and Community Education (M.A.), Business, Counselor Education, Early Childhood Education, Education of Exceptional Persons, Educational Psychology, Elementary Math Education, Literacy, Masters in Education, Mathematics Education, Music Education (M.A.), Speech-Language Pathology (M.S.), Student Affairs in Higher Education (M.A.), Teaching/English (M.A.)

Doctoral Degree (D.Ed.): Elementary Education, School Psychology, Education Leadership (with Superintendent's Letter of Eligibility)

Certification Only: Reading Specialist, School Psychologist, Elementary/Secondary Principal, Superintendent's Letter of Eligibility

Teacher Certification Programs

Programs in teacher education provide students with opportunities to gain competence in both generic and program-specific competencies. Students who prepare to become teachers should be able to demonstrate:

1. depth and breadth of knowledge in subject matter content and pedagogical skills.
2. an understanding of and the ability to apply the theoretical and practical aspects of human growth and development as they relate to teaching and learning.
3. skills and abilities to work collaboratively with others.
4. professional commitment to students, colleagues, and the community.
5. the belief that professional development is an ongoing process.
6. an understanding of the historical and philosophical foundations of American education.

Teacher education programs at IUP focus on student learners who are taught and guided by a faculty committed to the preparation of competent teachers. Students preparing to become teaching professionals must exhibit humanism and adaptability, practice and communicate critical thinking skills, and become excellent role models. These qualities are developed through coursework and activities that emphasize the liberal studies in concert with appropriate professional pedagogy. Collaboration is modeled as university faculty, public school personnel, and students work together to accomplish goals of the IUP teacher education programs.

Degree Requirements

All degree candidates in the College of Education and Educational Technology (except for three special programs) must satisfactorily complete a minimum of 124 semester hours in three categories: Liberal Studies, a specialized major field, and professional education. Program revisions are ongoing in an attempt to provide teachers in training with the most current information related to teaching and learning. Students should always consult with advisors to determine what changes, if any, have been made in their chosen program of study.

Liberal Studies—52-55 semester hours, described in this catalog under Requirements for Graduation.

Specialized major field—requirements listed under department offerings.

Teacher Education Program—30 semester hours, as follows:

Pre-professional Sequence—9 semester hours		
COMM 103	Digital Instructional Technology	3sh
EDSP 102	Educational Psychology	3sh
FDED 102	American Ed in Theory and Practice	3sh
Professional Sequence--21 semester hours:		
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh
EDUC 242	Pre-student Teaching Clinical Exp I	1sh
EDUC 342	Pre-student Teaching Clinical Exp II	1sh
EDUC 442	School Law	1sh
	Methods Course - (Teaching of _____)	3sh
EDUC 4XX	Student Teaching - (One semester)	12sh

Change of Major to a Teacher Education Program

Currently enrolled students who wish to make application for a teacher education program may secure an application for a Change of Major from the college dean's office or department that houses the major. Elementary Education, Early Childhood Education, and Special Education Programs are in the College of Education and Educational Technology. Secondary education programs are in the college of their respective disciplines. A minimum cumulative GPA of 2.6 for 2001-02, 2.8 for 2002-03, 3.0 for 2003-04 is required by Chapter 354 of the Pennsylvania Education Code.

Students must complete a Change of Major form and submit it to the department chairperson of the appropriate academic department. The application is reviewed by the chairperson and/or the teacher education coordinator, and a recommendation is then forwarded to the appropriate college dean's office for final review and action.

Students considering a Change of Major must also comply with the requirements of the 3-Step Process to enter the Teacher Education Professional Sequence. Students should consult with the department chairperson or program coordinator of the new major to determine specific requirements for effecting a change of major.

IUP Teacher Education 3-Step Process

To insure that students in IUP teacher preparation programs are progressively developing the necessary knowledge, skills, and dispositions to become a teacher, there is an evaluation and advisement of each candidate at each of three stages. Student progression to the next step is predicated on a positive recommendation by the program coordinator and academic advisor. As a result, there is an evaluation and advisement at each of the three steps.

When students are admitted to the university and declare an intent to pursue the teacher certification program, they will be given a program code that designates that intention, but at that point, they will not be fully admitted to the teacher certification program.

Initial Requirements

Prior to being formally admitted to the IUP Teacher Certification Program, the following initial requirements must be met by candidates:

- Complete a minimum of 48 semester hours of university coursework and establish a minimum cumulative GPA of 2.6 for 2001-02, 2.8 for 2002-03, 3.0 for 2003-04.
- COMM 103/301 Digital Instructional Technology with a grade of C or better.
- FDED 102/202 American Education in Theory and Practice with a grade of C or better.
- EDSP 102 Educational Psychology with a grade of C or better.
- Schedule and pass the PRAXIS I exams.
- Have completed and passed with a grade of C or better 6 semester hours of college-level mathematics.
- Have completed and passed with a grade of C or better 6 semester hours of English composition and literature.
- Begin to develop a professional portfolio based on the requirements and expectations of the program department.

Step 1. Admission to Teacher Certification Program

Procedure: During the student's third semester at IUP, candidates must file an application and personal goals essay with the major academic advisor. The advisor or departmental program coordinator will review, recommend approval or denial, and forward the application to the Office of the Associate Dean for Teacher Education, College of Education and Educational Technology. Applications will be reviewed immediately after posting of semester grades.

Transfer students from either within the university or from another institution and postbaccalaureate students will have their transcripts individually reviewed by the associate dean for Teacher Education, College of Education and Educational Technology, and the coordinator of the selected certification program to determine a specific, sequenced program of study that will be in concert with the program and sequence of other applicants but, to the extent possible, reflective of their previously earned courses and completed experiences.

Requirements:

A. Completion of at least 48 semester hours of university coursework and establishment of a minimum cumulative GPA of 2.6 for 2001-02, 2.8 for 2002-03, 3.0 for 2003-04 as required/revised by Chapter 354 of the Pennsylvania Education Code. Transfer students and students seeking

second degree-first certification and second certification with sufficient semester hours (18) must complete one semester (12sh minimum) at IUP to establish a GPA.

B. Completion of COMM 103/301 with a grade of C or better.
C. Completion of FDED 102/202 with a grade of C or better.
D. Completion of EDSP 102 with a grade of C or better.
E. Completion of ENGL 101 and the IUP Liberal Studies requirement in ENGL/ENGL 121 Humanities Literature with a grade of C or better.
F. Completion of 6 semester hours of college-level mathematics with a grade of C or better.
G. An affirmative recommendation from the major academic advisor.
H. Completion of initial speech/hearing screening test.
I. Clearance on TB testing.
J. Attainment of a satisfactory score on the four components of PRAXIS I exams, (Writing, Math, Reading, Listening) to be scheduled by the student and taken no later than the end of the second semester at IUP. The PRAXIS exams may be taken a maximum of two times before the student is ineligible for admission to IUP teacher certification programs. The writing section of the PRAXIS I exams should not be taken until after completion of ENGL 101. **Note:** PRAXIS information is available from the Office of Career Services.
K. Program department evaluation and approval of the student's professional portfolio based upon established criteria.
L. Completion of any other program department requirements as outlined in this catalog.
M. Satisfactory completion of an essay describing personal goals and the reason for wanting to become an educator.

Results: If the requirements are met, the associate dean for Teacher Education, College of Education and Educational Technology, will send the student a letter of admission to the Teacher Certification Program. The program code for the student will be changed to reflect the status of admission to the Teacher Certification Program. At this point, the student may consider enrolling in the following courses from the professional education core:

- EDUC 242 Pre-Student Teaching Clinical Experience I
- EDUC 342 Pre-Student Teaching Clinical Experience II
- EDSP 377/477 Educational Tests and Measurements
- EDUC 442 School Law
- EDEX 300 for Elementary and Early Childhood majors or EDEX 301 for all other secondary and specialty area majors
- Appropriate program-specific methods courses

Notes:

1. EDUC 242 and EDUC 342 must be taken in sequence and may not be taken simultaneously during the same semester. Acts 34 and 151 clearances are valid for only one year. After receiving the initial set of clearances, teacher preparation students must apply for new clearances during the month of May of each year to insure that a valid clearance is on file before going into the schools for any field experience.
2. If the requirements for "Admission to Teacher Certification are not met by the end of the student's fourth semester or after completing 60 semester hours, the student will not be permitted to continue pursuit of professional education and will be counseled into another major or program of study.

Step 2. Admission to Student Teaching

Procedure: The student must file an application through the department coordinator with the Office of the Associate Dean for Teacher Education, College of Education and Educational Technology, at least one semester before the actual experience.

Requirements:

A. Completion of all requirements in Step 1 including:
   1. All required professional education core courses with a minimum grade of C in each:
      a. EDEX 300 or 301
      b. COMM 103/301
      c. FDED 102/202
      d. EDSP 102
      e. EDUC 242
      f. EDUC 342
      g. EDUC 442
      h. EDSP 377/477 (where required)
   2. Methods courses in major area
B. Satisfactory completion of at least 91 semester hours with a minimum cumulative GPA of 2.6 in 2001-02, 2.8 in 2002-03, and 3.0 in 2003-04 as required/revised by Chapter 354 of the Pennsylvania Education Code. Transfer students with sufficient semester hours (91) must complete one semester (12sh minimum) at IUP to establish a GPA.
C. Completion of the Liberal Studies Science requirement courses with a minimum of grade of C in each.
D. Attainment of a passing score on the currently required PRAXIS II exams (and other Pennsylvania Department of Education examinations required for the specific teaching disciplines), as set annually by the Pennsylvania Secretary of Education.
E. Affirmative recommendation by the student's major departmental advisor or program coordinator.
F. Program department evaluation and approval of the student's professional portfolio based upon the respective program's established criteria.
G. Completion of any other program department requirements as outlined in this catalog.

Results: If the requirements are met, the associate dean for Teacher Education, College of Education and Educational Technology, will confirm approval by letter and process the student teaching placement. It is the student's responsibility to formally register for student teaching during the registration process.

If the requirements are not met, the student will be informed of the denial by letter and be administratively removed from the student teaching placement. The student may not register for student teaching until deficiencies are met and/or removed from the student's academic record. It may also be determined that the student should be counseled into another field of study.

Step 3. Recommendation for Certification

Procedures: Complete application for the Pennsylvania Department of Education Certification and file with the certification officer (associate dean for Teacher Education, College of Education and Educational Technology) by the listed dates appropriate to the anticipated date of graduation.

Requirements:

A. A minimum grade of C in all professional education courses and an minimum cumulative GPA of 2.6 for students admitted into teacher education in 2001-02, 2.8 for students admitted into teacher education in 2002-03, and 3.0 for students admitted into teacher education thereafter as required/revised by Chapter 354 of the Pennsylvania Education Code.
B. Review and recommendation by the major academic advisor indicating completion of all departmental teacher education requirements including final passage of the professional portfolio.
C. Completion of student teaching with a minimum grade of C.
D. Payment of the current processing fees.
E. No criminal charges or convictions.

Appeal Provision: A student who believes that any requirement of this policy has been inequitably applied or that he/she merits special consideration, may appeal through the proper sequence of channels: academic advisor, chairperson, and finally the associate dean for Teacher Education, College of Education and Educational Technology. Appeals must be made before the end of the next regular academic semester following the application.

Every effort should be made to resolve the appeal through the process so described. If, at the conclusion of the appeals process, the student is still in disagreement with the findings, the student may request review before the Teacher Education Appeals Committee of the Academy for Teacher Preparation. The committee will be composed of three members representing the faculty of the Academy for Teacher Education Preparation, the Teacher Education Coordinator's Council, and senior teacher preparation students.

To initiate an appeal, the student must file a form obtained at the Office of the Associate Dean for Teacher Education, College of Education and Educational Technology. Appeals will be heard only during the regular academic semester. The student will be expected to submit written documentation of his/her complaint about the process of review for continuation or eligibility in the teacher education program. The committee will review the materials and make its recommendation to the associate dean for Teacher Education, College of Education and Educational Technology. A final decision rests with the associate dean for Teacher Education, College of Education and Educational Technology, who is the certification officer.

End Notes

In all cases where advisor action is required, departments may choose to use a committee or other departmentally approved process. In cases where someone other than the academic advisor supplies recommendations, the department needs to place a copy of its policy and procedures on file with the associate dean for Teacher Education, College of Education and Educational Technology.

Some departments have additional Junior Standing requirements in place. Departments may continue to apply those requirements but need to keep a current copy of these requirements on file with the associate dean for Teacher Education, College of Education and Educational Technology.

The policy becomes effective with those students applying for admission to teacher certification after January, 2001. However, any student admitted to teacher education after October 7, 2000, but before August, 2001, must have a cumulative GPA of 2.6 in 2001-02, 2.8 in 2002-03, and 3.0 in 2003-04 and must meet all of the other Chapter 354 requirements. Candidates admitted to teacher education prior to October 7, 2000, and graduating after September 1, 2001, must have a cumulative GPA of 2.6 and meet all other requirements of Chapter 354.

Additional Note

From September 1, 2001, through August, 2002, applicants for entrance to teacher certification who do not have the required 6 semester hours in mathematics or English composition and literature must complete these semester hours prior to admission to student teaching. Beginning in September, 2002, applicants for entrance to teacher certification must have these semester hours completed as part of the 48 semester hours for admission.

Federal Higher Education Act Title II

The Federal Higher Education Act Title II requires all institutions that educate teachers to publish annually the passing rates on PRAXIS tests for their Program Completers. The annual report for IUP can be found at the following website: *http://www.coe.iup.edu/titleii.*

Student Teaching

Student teaching is designed to be the culminating learning experience for prospective teachers. Student teachers practice teaching and managing a classroom under the supervision of a full-time master teacher in an off-campus center. A university supervisor is assigned to work with individual student teachers and cooperating teachers. To gain admission to student teaching, applicants must have achieved a minimum cumulative GPA of 2.6. In addition, students must complete all requirements of the 3-Step Process and should complete all other components of the Liberal Studies and professional core before student teaching. Some programs have standards above the minimum 2.6 cumulative GPA and/or course grade expectations above the minimum grade of C. Each student should counsel with his/her advisor for information about specific program requirements related to qualification for student teaching.

Student teaching is the capstone experience in the program of the emerging professional educator. Student teaching assignments are the responsibility of the university. To avoid conflicts of interest, students will normally not be assigned to districts from which they graduated or to districts in which they permanently reside or to schools in which an immediate family member is employed.

Exceptions to this policy may be made in large urban school districts such as Pittsburgh and Philadelphia where there are numerous elementary and secondary schools so avoidance of assigning student teachers to their "home school area" can be achieved.

Any exception to this policy must be approved by the dean, College of Education and Educational Technology, or his/her designee.

Field Placements

The Office of Student Teaching determines final placements for all fieldwork conducted in the public schools. In accordance with university policy, students must be officially enrolled in the course for which the fieldwork is being done. Students entering a classroom without being duly registered are in violation of university policy and may place themselves at risk legally.

International Student Teaching Opportunities

IUP students enrolled as teacher education majors in all certification areas are eligible to participate in a half-semester student teaching program. Students participate in this program during the semester in which they register to student teach, either in the fall or the spring. They are assigned to a teaching site in the United States for the first half of the semester. The second half of the student teaching experience is completed in an overseas site. The program provides students with teaching experiences in one of the following countries: Copenhagen, Denmark; London, England; Worcester, England; Paris, France; Malahide, Ireland; and Gronigen, The Netherlands. Teaching assignments are made for all certification areas.

Students wishing to participate in this program must have a cumulative GPA of 2.8 or better, and a GPA of 2.8 or better in the professional core subjects and the major. The student teacher must demonstrate competency in effective classroom teaching practices receiving a minimum grade of B in the mid-semester evaluation. Upon approval of the IUP supervisor, the international student teaching assignment is confirmed.

In addition to IUP tuition and partial fees, students must pay a study abroad fee of $500. Travel costs, personal expenses, and living accommodation costs for room and board (paid to the host family) are the responsibility of the student. Living accommodations are arranged with host families near teaching sites.

Applications may be made anytime; however, preference is given to students who submit application materials one year before they student teach. Interviews for tentative acceptance will be scheduled with the international Student Teaching Committee two semesters prior to student teaching. For more information, contact Dr. Robert King, Department of Professional Studies in Education, at 724-357-2416.

Removal of a Student Teacher from a Student Teaching Placement

Purpose: To establish reasons or a process for removal of a student teacher from the student teaching assignment. The first two items are consistent with Act 34, Criminal Record Check; item 3 establishes a procedure if student behavior is not consistent with appropriate expectations of the school district; item 4 establishes a process and assures that the student teacher learns of unsatisfactory progress as early as possible; and item 5 is an appeal process.

Policy: Student teachers are ultimately guests of the cooperating school districts and may be removed by the district officers. A student teacher may also be removed by IUP from the student teaching assignment for any of the following reasons:

1. If **indicted** for a felony, which is covered in the School Code and Act 34, there shall be a removal of the student teacher from the school assignment until the matter is cleared. When the student is cleared of the indictment, the student teaching assignment will be extended to cover the time missed during student teaching.
    1. If convicted of a felony, which **is covered in the School Code and Act 34**, the student teacher will be withdrawn from the student teaching assignment and will forfeit the time spent during the student teaching assignment.
    2. If the behavior exhibited by the student teacher is not acceptable to the school district, it should be documented by the school administrator/principal in collaboration with the cooperating teacher and the university supervisor/coordinator and director, Student Teaching Office. If after discussion with the student, improvement is evidenced, no further action will be taken by the Student Teaching Office.
    3. If it is determined either by the cooperating teacher or university supervisor that the teaching competency of the student teacher is at an unsatisfactory level based on the teaching competencies indicated on the evaluation form and not in the best interest of the students, a three-way conference of cooperating teacher, university supervisor, and student will be held to discuss the concern, possible outcomes, and remedial strategies. **If after consultation with the university director of Student Teaching, removal from this student teaching placement is necessary, this action shall be done by the director of Student Teaching and the dean of the College of Education and Educational Technology.** This behavior should be documented and discussed as early in the student teaching experience as possible.

4. **Decisions made under this policy may be appealed to the dean, College of Education and Educational Technology (certification officer).**

Certification Requirements

College of Education and Educational Technology requirements for recommendation for certification as a teacher, as well as the intermediate steps leading to commonwealth certification, are outlined in the 3-Step Process. The requirements include:

- a minimum grade of C in all professional education courses and a cumulative 2.6 GPA
- review and recommendation by the major academic advisor indicating completion of all university and departmental teacher education requirements
- completion of student teaching with a minimum grade of C
- successful completion of the PRAXIS Core Battery, PRAXIS General Knowledge, and PRAXIS Specialty Area Tests
- competency in working with students with special needs (Special Education)

Applications for certification cannot be processed until the student completes the Bachelor of Science in Education degree or its equivalent.

Dual Certification

The departments of Professional Studies in Education and Special Education and Clinical Services have developed guidelines for students wishing to complete academic requirements for a second certification.

Students majoring in Elementary Education may do this in Education of Persons with Hearing Loss, Education of Exceptional Persons, or Early Childhood Education; Early Childhood Education majors may do this in Education of Persons with Hearing Loss, Education of Exceptional Persons, or Elementary Education.

Majors in Education of Persons with Hearing Loss or Education of Exceptional Persons may do this in either Early Childhood Education or Elementary Education.

Forms for applying for dual certification are available in the offices of the two departments. Applications must be approved by the student's advisor and by the department chairperson or assistant chairperson of both departments. Students are advised that the completion of requirements will take approximately two extra semesters, and they may wish to explore the possibility of completing the second certification at a graduate level.

Commonwealth Requirements for Teacher Certification

(Excludes Vocational Instructional Certification. See "Center for Vocational Personnel Preparation" in the School of Continuing Education section of this catalog.)

Certification standards for commonwealth public school teachers are established by the Pennsylvania Department of Education and the Pennsylvania Board of Education. The academic advisor of the student's major department must verify for the dean of the College of Education and Educational Technology that all academic requirements are met. The student's name is then placed on the graduation list.

Applicants for certification must sign an attestment of United States citizenship. Applicants who are not citizens must have an immigrant visa which permits them to seek employment within the United States, and they must have declared the intent to become citizens of the United States. Applicants must also submit a physical examination report and certify they are not in the habit of using narcotic drugs in any form, do not use excessive amounts of intoxicating beverages, are not currently under indictment by legal authorities, and have not been convicted of a criminal offense. Applicants who are unable to meet one or more of these requirements must submit a full explanation with the application. In addition, they must attest to the fact that all information supplied in the application is accurate.

The Pennsylvania Department of Education issues an Instructional I certificate to beginning teachers upon graduation from and recommendation by the College of Education and Educational Technology. All candidates for the Instructional I certificate must successfully pass the National Teacher Exam general knowledge battery and selected specialty areas tests. Since IUP is a designated test site, registration for the PRAXIS may be completed through University Testing Services in the Career Services office. After completion of 24 additional semester hours of collegiate and/or in-service coursework and with successful teaching experience, students are eligible to receive an Instructional II certificate, which is a permanent certification to teach in the Commonwealth of Pennsylvania.

Professional Certification Application Fee

Beginning Fall Semester, 1998, all applicants for Teacher Certification or Professional Education Certifications from the Commonwealth of Pennsylvania through IUP will be assessed a $40 application fee. Of that fee, $15 will be forwarded to the Bureau of Teacher Certification, Pennsylvania Department of Education, in Harrisburg with the IUP recommendation for certification. Add-on and second certifications processed through IUP will also be assessed this fee. Requests for processing out-of-state teacher certification applications will be assessed a $25 processing fee per request.

The University Clinics

Two clinics under the supervision of the College of Education and Educational Technology offer diagnostic testing, remedial services, and instruction. The Speech and Hearing Clinic is organized and managed by the Department of Special Education and Clinical Services. The Child Study Center is housed in the Department of Educational and School Psychology.

The Speech and Hearing Clinic is staffed by Special Education faculty and supervised graduate students working toward advanced degrees in Speech-Language Pathology. Using state-of-the-art equipment, clinic personnel provide diagnosis of speech problems and hearing tests and evaluations, as well as a regular program of therapy for clients. As part of this program, clinic staff members provide testing and necessary therapeutic services to all teacher education candidates, who must meet strict speech and hearing clearances. Regularly enrolled students at the university, including all teacher certification candidates, are eligible to receive these services without charge.

The Child Study Center provides opportunities for School Psychology graduate students in the post-master's certification and doctoral programs to acquire professional skills under the supervision of certified faculty supervisors. Clinic personnel provide psychoeducational assessment for children and adolescents with learning and/or behavior problems. They also provide consultation for parents and public school personnel involved with these children.

The Literacy Center is housed within the Department of Professional Studies in Education. This center provides opportunities for graduate students in the M.Ed. in Literacy program to gain experience toward a Reading Specialist Certification. The center offers assessment and instruction in reading and writing for children and adolescents. These instructional sessions are offered in the fall, spring, and summer terms. Family literacy services are also available.

Graduate Programs

Information describing master's and doctoral programs in education may be found in the current issue of the *Graduate School Catalog*.

The University School

Judith M. Hechtman, Director; Beisel, Edwards, Ellermeyer, Hutson-Feudale, Mambo, Stephenson, Yost; and professors emeritae Fleming, Lingenfelter, Martin, Walthour

The University School is located in Davis Hall on the IUP campus, where it is housed with the departments of Professional Studies in Education and Special Education and Clinical Services. The University School provides a program of instruction for students in kindergarten through sixth grade. In addition, the school offers a rich variety of experimental and research activities for IUP faculty and students. Faculty members from disciplines as varied as music, physical education, Spanish, elementary education, and special education have ongoing programs which are carried out at the University School. Each year, hundreds of teacher education students participate in activities such as observations, lesson presentations, and student teaching. Graduate students utilize the University School to conduct research on teaching and learning. Research and experimental activities are scheduled with the director of the University School.

The University School is a member of the National Association of Laboratory Schools. Faculty members at the University School have received many grants and teaching awards in recognition of their contributions to the education profession.

Department of Adult and Community Education

Trenton R. Ferro, Chairperson; Dean

Website: *http://www.iup.edu/ace*

The Department of Adult and Community Education is a graduate department offering two programs leading to the Master of Arts degree: Adult and Community Education and Adult Education and Communications Technology. The Master of Arts in Adult and Community Education helps students develop skills related to teaching and planning educational programs for adults in a wide variety of settings, including business and industry, the community, social service organizations, health agencies and hospitals, colleges and universities, the government, and religious institutions. The Master of Arts in Adult Education and Communications Technology (AECT), jointly administered with the Department of Communications Media, prepares students to become adult educators with an emphasis on the use of technology, including computers, production design, radio and television, and distance education technology. Completion of appropriate requirements allows students in the AECT program to apply for PDE certification as an Instructional Technology Specialist.

Department of Communications Media

Kurt P. Dudt, Chairperson; Ausel, Handler, Juliette, Kanyarusoke, Kornfeld, Lamberski, Leidman-Golub, Lenze, Start, Wilson; and professors emeriti Klinginsmith, MacIsaac, Murray, Young

Website: *http://www.iup.edu/cm*

The department offers a Bachelor of Science in Communications Media and two minors, one in Communications Media and one in Educational Technology. The minor in Communications Media is an 18-semester-hour program designed to complement any major. The minor in Educational Technology is a 24-semester-hour program designed for students in the College of Education and Educational Technology who are completing a teaching degree. The department also serves preservice teachers and other students who are required to complete COMM 103.

The philosophy of the Communications Media Department is to prepare generalists in the area of communications. Our students may select from a number of elective courses, depending on their career interests.

The department faculty offers a wide variety of experience in all areas of communications media. With the combination of classroom work and the optional internship program, departmental graduates are competitive for positions in various areas. Students graduating with a degree in Communication Media have obtained positions in such areas as radio, television, cable television, public relations, advertising media, media relations, and corporate media relations.

Students changing majors from other academic departments within the university are required to be in good academic standing before the transfer will be approved.

Bachelor of Science—Communications Media

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **53-58**
Social Science: PSYC 101
Liberal Studies Electives: BTED/COSC/IFMG 101 (to be taken in the freshman year), no courses with COMM prefix, not to include courses cross-listed with COMM

Major: **42**
Required Courses:

COMM 101	Comm Media in American Society	3sh
COMM 150	Aesthetics and Theory of Comm Media	3sh
COMM 395	Career Planning in Comm Media	1sh
COMM 475	Senior Portfolio Presentation	1sh
COMM 493	Internship (summer only)	6, 9, or 12sh

Minimum of one course from the following list:

COMM 302	Research in Communications Media	3sh
COMM 303	Scriptwriting	3sh
COMM 330	Instructional Design for Training and Development	3sh
COMM 403	Broadcast Newswriting	3sh

Minimum of two courses from the following list:

COMM 240	Communications Graphics	3sh
COMM 249	Basic Audio Recording Techniques	3sh
COMM 251	Television Production	3sh
COMM 271	Beginning Photography	3sh
COMM 340	Advanced Communication Graphics	3sh
COMM 349	Radio Production	3sh
COMM 351	Advanced Video Production	3sh
COMM 371	Photography II: The Print	3sh
COMM 440	Multimedia Production	3sh
COMM 449	Advanced Audio Recording Techniques	3sh
COMM 451	Broadcast News Process	3sh
COMM 471	Electronic Imaging	3sh

Controlled Electives: 13-19sh
Other COMM elective courses including courses from the above lists not taken as part of those requirements.

Other Requirements: **21**
Courses outside Communications Media that augment the student's major course of study (advisor approval)

Free Electives: **3-8**

(#) Total Degree Requirements **124**

(#) A maximum of 12sh of COMM 493 can be applied to requirements for graduation.

Minor—Communications Media 18

Required Courses:

COMM 101	Comm Media in American Society	3sh
COMM ---	Electives in Communication Media	15sh

Minor—Educational Technology 24

Required Courses:

COMM 101	Comm Media in American Society	3sh
COMM 460	Emerging Trends in Comm Technology	3sh
BTED/COSC/IFMG 101	Microbased Computer Literacy	3sh
COMM ---	Electives in Communications Media	15sh

Department of Educational and School Psychology

Mary Ann Rafoth, Chairperson; Barker, Briscoe, Damiani, Hoellein, Levinson, Quirk, Rattan; and professors emeriti DeFabo, Meadowcroft, Yanuzzi

Website: *http://www.iup.edu/edsp*

The department provides courses to undergraduate and graduate students. Undergraduate students may declare a minor in Educational Psychology by making application to the director of the minor program. Fifteen semester hours of Educational Psychology courses are required for the minor.

The department also offers the M.Ed. in Educational Psychology as well as a post-master's certification and a Doctor of Education in School Psychology. Refer to the current *Graduate School Catalog* for details.

Department of Foundations of Education

Thibadeau; and professor emeritus Chu

Website: *http://www.iup.edu/fe*

The Department of Foundations of Education serves all undergraduate students in teacher certification preparation with an introductory course, American Education in Theory and Practice. Additional areas of coursework include urban education, curriculum development, and contemporary issues and trends in education.

Graduate courses offered by this department include Comparative, Historical, Philosophical, and Social Foundations of Education; Curriculum Development; Professional Negotiations in Education; and International Education Studies Program. For specific information concerning these courses, see the current edition of the *Graduate School Catalog*.

Department of Professional Studies in Education

George R. Bieger, Chairperson; Briscoe, Carreiro, Cole Slaughter, Corbett, Creany, Doverspike, Elliott, Farrah, Fennimore, Gerlach, Hannibal, Illig-Aviles, Jalongo, Kaufman, Kearney-Vakulick, King, Kupetz, Mikkelsen, Millward, Nicholson, Stamp, Tidwell, Mark Twiest, Meghan Twiest, L. Vold, Van; and professors emeriti Dorsey, Glott, Lott, McFeely, Mott, Reilly, Rizzo, E. Vold

Website: *http://www.iup.edu/pse*

Elementary Education Program

The Elementary Education program is designed to provide learning experiences which will assist students in developing into highly competent and effective teachers in grades K-6. Students are able to expand their knowledge through coursework and field experiences which embody content, knowledge of liberal studies, pedagogy, curriculum, human development and learning, and a historical and philosophical basis to undergird one's professional behavior. A minimum GPA, in accordance with Pennsylvania standards, is required to apply for teacher certification, to take major courses in the department, to apply for Junior Standing, and to student teach.

Early Childhood Education Program

The Early Childhood Education Program is designed to provide learning experiences which assist students to become competent and effective teachers in N-Grade 3. It prepares the students to select from among a variety of techniques and strategies those which appropriately expand children's cognitive, social, emotional, and physical development. Through lectures, research, and on-site experiences with young children, students are able to expand their own knowledge of and attitudes toward education of young children.

A minimum GPA, in accordance with Pennsylvania standards, is required to apply for teacher certification, to take major courses in the department, to apply for junior standing, and to student teach. Students must meet the requirements leading to teacher certification as outlined in this catalog.

Graduate Programs

Programs leading to the M.Ed. and Ed.D. degrees are described in the current issue of the *Graduate School Catalog*. Internships and assistantships are available.

Bachelor of Science in Education—Elementary Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **56-57**
Mathematics: MATH 151
Natural Science: SCI 101, 102, 103, and 104 (1)
Social Science: GEOG 101, 102, or 104 (one course), PSYC 101
Fine Arts: THTR 101
Liberal Studies Electives: MATH 152 (2); no courses with ELED prefix; not to include HMEC 218

College:		**27**
Professional Education Sequence (3)		
COMM 103	Digital Instructional Technology	3sh
EDSP 102	Educational Psychology	3sh
EDSP 177	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh
EDUC 242	Pre-student Teaching Clinical Exp I	1sh
EDUC 342	Pre-student Teaching Clinical Exp II	1sh
EDUC 441	Student Teaching	12sh
EDUC 442	School Law	1sh
FDED 102	American Ed in Theory and Practice	3sh
Major:		**36**
Required Courses:		
ELED 211	Music for the Elementary Grades	2sh
ELED 213	Art for the Elementary Grades	2sh
ELED 215	Child Development	3sh
ELED 221	Children's Literature	3sh
ELED 222	Reading for the Elementary School	3sh
ELED 257	Pedagogy I	3sh
ELED 312	Teaching of Elementary Science	2sh
ELED 313	Teaching Mathematics in the Elem School	3sh
ELED 314	Teaching of Health and Physical Ed	2sh
ELED 357	Pedagogy II	3sh
ELED 411	Teaching of Social Studies	3sh
ELED 425	Language Arts Across the Curriculum	3sh
EDEX 300	Education of Students with Disabilities in Inclusive Elementary Classrooms	2sh
EDUC 499	Multicultural/Multiethnic Education	2sh
Other Requirements:		**6**
Special electives from a defined discipline (3)		
Total Degree Requirements:		**125-126**

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.

(1) This sequence of 10sh fulfills the Liberal Studies natural science requirement.

(2) For students who test out of MATH 152, consult your advisor for suggested math courses.
More than twenty options are available for groupings in specific departments or cross-departmental areas. This requirement is also fulfilled by completion of an approved specialty such as FLISET, math, or reading.
- FLISET: see requirements in this catalog.
- Mathematics: MATH 317, 420, 456, 457, 458, 459, 471, 483 (math concentration requires 15sh to include MATH 151, 152)
- Reading: ECED 220 or 451, EDUC 408, ELED 422, (reading concentration requires 15sh to include ELED 221, 222, 425)
Students may select a set of special electives from the list of Liberal Studies electives or non-Western courses that have not been used previously in their program. With permission of the chairperson of Professional Studies in Education and a specific department, a student may be allowed to create an area of specialty other than those listed. See department office for full listing; check prerequisites carefully. Submit plan to advisor for approval.

Dual Certification

Students majoring in Early Childhood Education, Persons with Hearing Loss, or Education of Exceptional Persons may complete academic requirements for certification in Elementary Education by completing the following requirements. Students are advised that completion of requirements for a second certification will take approximately two extra semesters. In certain circumstances, such as for transfer students, students who must repeat courses, or when students take courses out of sequence, earning this second certification may take longer.

Dual Certification—Elementary Education for Majors in Early Childhood Education

EDUC 421	Student Teaching (Grade 4, 5, or 6) (1)	6sh
ELED 312	Teaching of Elem Science (Junior Block)	2sh
ELED 313	Teaching Mathematics in the Elementary School (2)	3sh

ELED 411	Teaching of Social Studies (Junior Block)	3sh
ELED 425	Language Arts Across the Curriculum	3sh

(1) Student teaching (12sh) for the first certification, Early Childhood Education, in grade K, 1, 2, or 3 will be completed prior to student teaching for this second certification.
(2) MATH 152 is a prerequisite for ELED 313 and should be taken as a Liberal Studies elective.

Dual Certification—Elementary Education for Majors in Education of Persons with Hearing Loss

ECED 312	Aesthetic Experiences for Young Children	3sh
EDUC 342	Pre-student Teaching Clinical Experience II (ELED)	1sh
EDUC 421	Student Teaching	6sh (1)
ELED 221	Children's Literature	3sh
ELED 257	Pedagogy I	3sh
ELED 312	Teaching of Elementary Science	2sh
ELED 313	Teaching Mathematics in the Elem School	3sh (2)
ELED 357	Pedagogy II	3sh
ELED 411	Teaching of Social Studies	3sh
ELED 425	Language Arts Across the Curriculum	3sh

Recommended Electives:

ELED 351	Creative Activities in the Elem School	3sh

(1) Students are required to do 6sh of student teaching in the regular elementary classroom in addition to the 12sh required in the EDHL major, or a total of 18sh of student teaching inclusive for both certifications.
(2) MATH 152 is a prerequisite for ELED 313 and should be taken as a Liberal Studies elective.

Dual Certification—Elementary Education for Majors in Education of Exceptional Persons

ECED 312	Aesthetic Exp for Young Children	3sh
EDUC 342	Pre-student Teaching Clinical Experience II (ELED)	1sh
EDUC 421	Student Teaching	6sh (1)
ELED 221	Children's Literature	3sh
ELED 257	Pedagogy I	3sh
ELED 312	Teaching of Elementary Science	2sh
ELED 313	Teaching Mathematics in the Elem School	3sh (2)
ELED 357	Pedagogy II	3sh
ELED 411	Teaching of Social Studies	3sh
ELED 425	Language Arts Across the Curriculum	3sh

Recommended Electives:

ELED 351	Creative Activities in the Elem School	3sh

(1) Students are required to do 6sh of student teaching in the regular elementary classroom in addition to the 12sh required in the EDEX major, or a total of 18sh of student teaching inclusive for both certifications.
(2) MATH 152 is a prerequisite for ELED 313 and should be taken as a Liberal Studies elective.

Bachelor of Science in Education—Early Childhood Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **56**
Mathematics: MATH 151
Natural Sciences: SCI 101, 102, 103, and 104
Social Science: GEOG 101, 102, or 104; PSYC 101
Liberal Studies Electives: no courses with ECED prefix; not to include HMEC 218

College: **27**
Professional Education Sequence:

COMM 103	Digital Instructional Technology	3sh
EDSP 102	Educational Psychology	3sh
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh
EDUC 242	Pre-student Teaching Clinical Exp I	1sh
EDUC 342	Pre-student Teaching Clinical Exp II	1sh
EDUC 441	Student Teaching	12sh
EDUC 442	School Law	1sh
FDED 102	American Ed in Theory and Practice	3sh

Major: **43**
Required Courses: (1)

ECED 200	Intro to Early Childhood Education	3sh
ECED 220	Language Development and Children's Literature	3sh
ECED 310	Integrated Curriculum I (Math, Science)	3sh
ECED 311	Integrated Curriculum II (Social Science)	3sh
ECED 312	Aesthetic Experiences for Young Children	3sh
ECED 315	Development and Learning Through Play	3sh
ECED 451	Teaching Primary Reading	3sh
EDEX 300	Education of Students with Disabilities in Inclusive Elementary Classrooms	2sh
EDEX 415	Preschool Education for Children with Disabilities	3sh
EDUC 499	Multicultural/Multiethnic Education	2sh
ELED 215	Child Development	3sh
ELED 257	Pedagogy I	3sh
ELED 357	Pedagogy II	3sh
HMEC 426	Techniques of Parent Education	3sh
MATH 320	Mathematics for Early Childhood	3sh

Free Electives: **3**

Total Degree Requirements: **129**

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(1) A 2.6 cumulative GPA is required to register for major courses.

Dual Certification

Students majoring in Education of Persons with Hearing Loss, Elementary Education, or Education of Exceptional Persons may complete academic requirements for certification in Early Childhood Education by completing the following requirements. Students are advised that completion of requirements for a second certification will take approximately two extra semesters. In certain circumstances, such as for transfer students, or students who must repeat courses, or when students take courses out of sequence, earning this second certification may take longer.

Dual Certification—Early Childhood Education for Majors in Education of Persons with Hearing Loss

ECED 200	Intro to Early Childhood Education	3sh
ECED 220	Language Development and Children's Literature	3sh
ECED 310	Integrated Curriculum I	3sh
ECED 311	Integrated Curriculum II	3sh
ECED 315	Development and Learning Through Play	3sh
EDUC 242	Pre-student Teaching Clinical Exp I	1sh (1)
EDUC 342	Pre-student Teaching Clinical Experience II (ECED)	1sh
EDUC 421	Student Teaching (N-3) (2)	6sh
ELED 357	Pedagogy II	3sh
MATH 320	Mathematics for Early Childhood	3sh

Recommended Electives:

ECED 312	Aesthetic Experiences for Young Children	3sh
ELED 351	Creative Activities in the Elementary School	3sh

(1) EDHL majors must complete 10 hours of observation in an N-3 classroom.
(2) EDHL majors must complete 6sh of student teaching in ECED (N-3) in addition to the 12sh required in the EDHL major, or a total of 18sh of student teaching inclusive for both certifications.

Dual Certification—Early Childhood Education for Majors in Education of Exceptional Persons

ECED 200	Intro to Early Childhood Education	3sh
ECED 220	Language Development and Children's Literature	3sh
ECED 310	Integrated Curriculum I	3sh
ECED 311	Integrated Curriculum II	3sh
ECED 315	Development and Learning Through Play	3sh
EDEX 415	Preschool Education for Children with Disabilities	3sh
EDUC 242	Pre-student Teaching Clinical Exp I	1sh (1)
EDUC 342	Pre-student Teaching Clinical Experience II (ECED)	1sh
EDUC 421	Student Teaching (N-3) (2)	6sh
ELED 357	Pedagogy II	3sh

Recommended Electives:

ECED 312	Aesthetic Experiences for Young Children	3sh
ELED 351	Creative Activities in the Elem School	3sh

(1) EDEX majors must complete 10 hours of observation in an N-3 classroom.

(2) EDEX majors must complete 6sh of student teaching in ECED (N-3) in addition to the 12sh required in the EDEX major, or a total of 18sh of student teaching inclusive for both certifications.

Dual Certification—Early Childhood Education for Majors in Elementary Education

ECED 200	Intro to Early Childhood Education (Spring semester-Sophomore Block only)	3sh
ECED 310	Integrated Curriculum I (Spring semester-Junior Block only) (1)	3sh
ECED 311	Integrated Curriculum II (Spring semester-Junior Block only) (1)	3sh
ECED 315	Development and Learning Through Play (Fall semester)	3sh
EDEX 415	Preschool Education for Children with Disabilities (Spring semester)	3sh
EDUC 421	Student Teaching (Grade K, 1, 2 or 3) (2)	6sh

(1) These are block (field experience) courses. Plan carefully to have time for a field placement. Check with your advisor and the coordinator of the Early Childhood Junior Field Experience.

(2) Student teaching (12sh) for the first certification, Elementary Education, in grade 4, 5, or 6 will be completed prior to student teaching for this second certification.

Foreign Languages and International Studies for Elementary Teaching (FLISET) (1)

Elementary Education/Early Childhood majors may develop an academic specialty in Spanish and International Studies, which will prepare them to teach in elementary programs in which content teaching in the foreign language is the objective. To complete this specialty area, students must: (1) attain a minimum level of intermediate-high on the ACTFL/ETS scale; (2) successfully complete a six-week summer study/internship abroad at a site approved by the department (usually the summer following the junior year); (3) successfully complete the student teaching experience in a bilingual or immersion elementary school classroom; and (4) complete the following minimum number of semester hours in Spanish:

Required Courses:		22 (2)
SPAN 201	Intermediate Spanish	4sh
SPAN 221	Intermediate Spanish Conversation	3sh
SPAN 230	Intermediate Spanish Composition	3sh
SPAN 290	Spanish for Elementary Teaching	3sh
SPAN 321	Advanced Spanish Conversation	3sh
SPAN 340	Hispanic Civ Through the 19th Century	3sh
SPAN 390	Teaching of Elementary Content Through the Spanish Language	3sh
Controlled Elective: one course		3
SPAN XXX	Elective (taken abroad)	3sh
Other Requirements:		0-6
GEOG 252, PLSC 387, or ANTH 474 as the non-Western course		0
Study/internship in Mexico for six to eight weeks the summer following junior year		0-6sh
Student teaching experience in immersion classroom		0sh

(1) Students interested in the program should contact the director of the FLISET Program in the Department of Spanish and Classical Languages or the FLISET coordinator in the Department of Professional Studies in Education.

(2) While the total number of semester hours required in Spanish in order to attain the desired proficiency level will vary from student to student depending on the entry level of proficiency, most students can expect to complete between 25 and 34sh.

Department of Special Education and Clinical Services

Richard C. Nowell, Chairperson; Appl, Baker, Benham, Domaracki, Fallon, Ferrell, Glor-Sheib, Hoffman, Jackson, Klein, Marshak, Nolan, Reber, Robertson, Stein, Tellis; and professors emeriti M. Bahn, W. Bahn, Fiddler, Morris, Shane

Website: *http://www.iup.edu/special-ed*

This department offers the degree of Bachelor of Science in Education in **Education of Exceptional Persons**, **Speech-Language Pathology and Audiology**, and **Education of Persons with Hearing Loss**, and a Bachelor of Science in **Rehabilitation**. Each of the four majors follows a prescribed sequence of courses.

The following grade policy applies to all four undergraduate programs of study in the Department of Special Education and Clinical Services. Individual students may appeal any aspect of the policy by making a formal written request to the Departmental Appeals Committee.

1. No more than one "D" in major courses will be accepted toward graduation and certification.
2. No "D" is permitted as the final recorded grade in any of the following courses:

EDEX 425	Methods and Curriculum (Mild-Moderate Disabilities)
EDEX 435	Methods and Curriculum (Severe-Profound Disabilities)
EDHL 308	Language for Persons with Hearing Loss
EDUC 421	Student Teaching
EDUC 441	Student Teaching
RHAB 322	Rehabilitation Case Study and Interpretation
RHAB 488	Field Training in Rehabilitation I
RHAB 493	Field Training in Rehabilitation II
SPLP 122	Clinical Phonology

The following enrollment policy applies to three undergraduate programs in the Department of Special Education and Clinical Services: Education of Exceptional Persons, Education of Persons with Hearing Loss, and Speech-Language Pathology and Audiology. To enroll in a 300- or 400-level course in those programs, a student must have a minimum 2.6 cumulative GPA and must meet the other provisions of the 3-Step Process for admission to teacher education and must either be a departmental major or have permission of the department chairperson.

A. Education of Exceptional Persons

Completion of the sequence of study in this major leads to Pennsylvania Department of Education special education certification (Mentally and/or Physically Handicapped Certificate). Students will be prepared to teach persons with mental retardation, autism, developmental disabilities, learning disabilities, brain injuries, emotional/behavioral disorders, physical disabilities, and multiple disabilities. Academic coursework and field experiences are integrated within the course of study. The program also provides a foundation for pursuing additional study at the graduate level.

Bachelor of Science in Education—Education of Exceptional Persons (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-55
Mathematics: MATH 151 (1)
Social Science: PSYC 101
Natural Science: laboratory science sequence required (SCI 105-106 recommended)
Liberal Studies Electives: no course with EDEX prefix

College: 27

Professional Education Sequence:

COMM 103	Digital Instructional Technology	3sh
EDSP 102	Educational Psychology	3sh
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh
EDUC 242	Pre-Student Teaching Clinical Exp I	1sh
EDUC 342	Pre-Student Teaching Clinical Exp II	1sh
EDUC 421	Student Teaching (Mild/Moderate)	6sh
EDUC 441	Student Teaching (Severe/Profound)	6sh
EDUC 442	School Law	1sh
FDED 102	American Ed in Theory and Practice	3sh

Major: 43

Required Courses:

EDEX 111	Introduction to Exceptional Persons	3sh
EDEX 112	Typical and Atypical Growth and Development	3sh
EDEX 221	Methods of Teaching Mathematics to Persons with Disabilities	3sh
EDEX 222	Methods of Teaching Reading to Persons with Disabilities	3sh
EDEX 231	Methods of Teaching Content Area Subjects to Persons with Disabilities	3sh
EDEX 321	Methods of Teaching Language Arts to Persons with Disabilities	3sh (2)
EDEX 340	Introduction to Behavior Management in Special Education	3sh
EDEX 416	Education of Persons with Emotional or Behavioral Disorders	3sh
EDEX 417	Education of Persons with Mental Retardation or Developmental Disabilities	3sh
EDEX 418	Education of Persons with Physical or Multiple Disabilities	3sh
EDEX 419	Education of Persons with Brain Injuries or Learning Disabilities	3sh
EDEX 425	Methods and Curriculum (Mild-Moderate Disabilities)	3sh
EDEX 435	Methods and Curriculum (Severe-Profound Disabilities)	3sh
EDEX 440	Ethical and Professional Behavior	1sh
SPLP 254	Classroom Mgmt of Language Disorders	3sh

Total Degree Requirements: 124-125

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(1) Program revision in process: 3 additional sh of math will be required by the Pennsylvania Department of Education.
(2) A minimum cumulative GPA of 2.6 is required to enroll in 300- and 400-level major courses.

Dual Certification

Students majoring in Elementary Education or Early Childhood Education may complete academic requirements for certification in Education of Exceptional Persons by completing the following requirements. Students are advised that completion of requirements for a second certification will take approximately two extra semesters.

Dual Certification—Education of Exceptional Persons for Majors in Early Childhood in Education or Elementary Education

EDEX 111	Introduction to Exceptional Persons	3sh
or		
EDEX 300	Education of Students with Disabilities in the Inclusive Elementary Classroom	2sh
EDEX 416	Education of Persons with Emotional or Behavioral Disorders	3sh
EDEX 417	Education of Persons with Mental Retardation or Developmental Disabilities	3sh
EDEX 418	Education of Persons with Physical or Multiple Disabilities	3sh
EDEX 419	Education of Persons with Brain Injuries or Learning Disabilities	3sh
EDEX 425	Methods and Curriculum (Mild-Moderate Disabilities)	3sh
EDEX 435	Methods and Curriculum (Severe-Profound Disabilities)	3sh
EDEX 440	Ethical and Professional Behavior	1sh
EDUC 342	Pre-student Teaching Clinical Experience II (EDEX)	1sh
EDUC 421	Student Teaching (EDEX)	6sh (1)

Recommended Electives:

EDEX 340	Introduction to Behavior Management in Special Education	3sh
SPLP 254	Classroom Mgmt of Language Disorders	3sh

(1) The 6sh of student teaching in EDEX with students with severe and profound disabilities are in addition to the 12sh normally required for Elementary Education or Early Childhood Education majors.

B. Speech-Language Pathology and Audiology

Completion of the sequence of courses in Speech-Language Pathology and Audiology serves as a preprofessional program for students planning to become practicing speech-language pathologists or audiologists. Students entering the undergraduate program should be aware of the following:

1. IUP is accredited by the Educational Standards Board of the American Speech-Language-Hearing Association and qualifies a person for the Certificate of Clinical Competence from the American Speech-Language-Hearing Association and Pennsylvania State Licensure.
2. National certification, state licensure, and Pennsylvania Department of Education Certification in Speech-Language Impaired are available only to holders of the master's degree in Speech-Language Pathology.
3. Students will need to project a minimum cumulative GPA of 3.0 to qualify for admission to most graduate schools.
4. Upon completion of a master's degree at IUP, students will be prepared to provide services in work settings such as hospitals, community clinics, public health programs, and rehabilitation settings.
5. Students who elect to prepare for certification in Speech-Language Impaired from the Pennsylvania Department of Education must successfully complete the College of Education and Educational Technology requirements listed below prior to enrollment in the Master of Science degree in the Speech-Language Pathology program at IUP.

The University Speech and Hearing Clinic serves as the laboratory for the undergraduate clinical practicum. Prior to registration for the clinical practicum course (SPLP 420), students must earn a minimum cumulative 3.0 GPA and complete the following hours of observation through enrollment in EDUC 242 and 342:

A. 25 hours of observation in speech-language pathology supervised by an IUP faculty member who holds a Certificate of Clinical Competence in Speech-Language Pathology.

B. 20 hours of classroom observation:
   1. Five hours in regular education classrooms, K-3.
   2. Five hours in special education classrooms.
   3. Five hours in regular education classrooms with integrated special students.
   4. Five hours in community facilities such as preschools, sheltered workshops, etc. Services in this category should be of a noneducational nonspeech pathology type.

Bachelor of Science in Education—Speech-Language Pathology and Audiology (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-55
Mathematics: MATH 217 (1)
Social Science: PSYC 101
Natural Science: laboratory science sequence required (BIOL 103-104 recommended)
Liberal Studies Electives: PSYC 310, no courses with SPLP prefix

College (*): The following are required ONLY for students electing the pre-teacher certification track: 0-13

Professional Education Sequence:

COMM 103	Technology for Learning Instruction	3sh
EDSP 102	Educational Psychology	3sh
EDUC 442	School Law	1sh
FDED 102	American Ed in Theory and Practice	3sh
SPLP 412	Organization and Administration of Speech and Hearing Programs	3sh

Major: 38-41
Required Courses:

EDEX 111	Introduction to Exceptional Persons	3sh
EDEX 222	Methods of Teaching Reading to Persons with Disabilities	3sh
EDUC 242	Pre-Student Teaching Clinical Exp I	1sh
EDUC 342	Pre-Student Teaching Clinical Exp II	1sh
SPLP 111	Introduction to Communication Disorders	3sh
SPLP 122	Clinical Phonology	3sh
SPLP 222	Introduction to Audiology	3sh
SPLP 242	Speech Science I	3sh
SPLP 251	Anatomy and Physiology of the Speech and Hearing Mechanism	3sh
SPLP 311	Aural Rehabilitation	3sh (2)
SPLP 334	Language Development	3sh
SPLP 342	Speech Science II	3sh
SPLP 406	Articulation and Language Disorders	3sh
SPLP 408	Stuttering and Voice Disorders	3sh
Optional:		
SPLP 420	Speech Clinic	3sh

Free Electives: EDUC 499 recommended
General Track 28-32
Pre-Teacher Certification Track 15-19

Total Degree Requirements: 124

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(1) Program revision in process: 3 additional sh of math will be required by the Pennsylvania Department of Education.
(2) A minimum cumulative 2.6 GPA is required to enroll in all 300- and 400-level courses for both pre-teacher certification and noncertification speech-language pathology majors.

C. Rehabilitation

Completion of this program leads to the Bachelor of Science with a specialization in rehabilitation. The program is designed for students seeking career opportunities with health and welfare agencies and institutions and also provides a foundation for pursuing additional work at the graduate level.

Bachelor of Science—Rehabilitation

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-55
Mathematics: MATH 217
Natural Science: laboratory science sequence required
Social Science: PSYC 101, SOC 151
Liberal Studies Electives: PSYC 321, no courses with RHAB prefix

Major: 48
Required Courses:

RHAB 200	Introduction to Rehabilitation	3sh
RHAB 211	Medical Aspects of Rehabilitation	3sh
RHAB 220	Neurological Basis of Disability	3sh
RHAB 312	Psychological Basis of Disability	3sh
RHAB 321	Principles and Methods of Rehab	3sh
RHAB 322	Rehab Case Study and Interpretation	3sh
RHAB 360	Rehabilitation Counseling: Strategies	3sh
RHAB 410	Vocational Assessment in Rehab Counseling	3sh
RHAB 412	Occupational Aspects of Rehabilitation	3sh
RHAB 422	Current Topics in Rehabilitation	3sh
RHAB 460	Advanced Rehabilitation Counseling	3sh
RHAB 484	Directed Rehabilitation Activities	3sh
RHAB 488	Field Training in Rehabilitation I	6sh
RHAB 493	Field Training in Rehabilitation II	6sh

Other Requirements: 6-7
Required Course:

EDEX 111	Introduction to Exceptional Persons	3sh
Controlled Elective: (1)		3-4sh

BIOL 150, BIOL 151, BIOL 155, EDEX 340, EDEX 416, EDEX 417, EDEX 418, EDEX 419, EDHL 115, EDHL 244, EDHL 331, HPED 221, PSYC 312, PSYC 378, SOC 251, SOC 335

Free Electives: 14-16

Total Degree Requirements: 124

(1) Some controlled elective choices have prerequisites that may be used as free electives.

D. Education of Persons with Hearing Loss

Completion of the sequence of courses in Education of Persons with Hearing Loss leads to a Bachelor of Science degree in Education and Pennsylvania Department of Education certification as a "Teacher of the Hearing Impaired, K-12." Students are provided with the basic skills to teach in special classes for hard-of-hearing or deaf individuals.

Students enrolled in this sequence of study are prepared to assume positions as itinerant hearing therapists and classroom teachers for individuals ranging from preschoolers to adults. Work settings may include public schools, continuing education programs, and home training situations.

Observations, clinical experience, and practicum are required prior to placement in a school environment for the student teaching experience. The student will complete the following 50 hours of observation through enrollment in EDUC 242.

A. 25 hours of observation of itinerant and self-contained classrooms for the hearing impaired.
B. 10 hours of observation in regular education classrooms.
C. 10 hours of observation in special education classrooms.
D. 5 hours of observation in a noneducational setting.

The student will complete 30 hours of individual clinical experience through enrollment in EDHL 329 and 330 and 25 hours of school-based practicum through enrollment in EDUC 342.

Bachelor of Science in Education—Education of Persons with Hearing Loss (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-55
Mathematics: MATH 151 (1)
Social Science: PSYC 101
Natural Science: laboratory science sequence required
Liberal Studies Electives: no courses with EDHL prefix

College: 30

Professional Education Sequence:

COMM 103	Digital Instructional Technology	3sh
EDHL 360	General Methodology for Education of Persons with Hearing Loss	3sh
EDSP 102	Educational Psychology	3sh
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh (2)
EDUC 242	Pre-student Teaching Clinical Exp I	1sh
EDUC 342	Pre-student Teaching Clinical Exp II	1sh
EDUC 421	Student Teaching-Hearing Impaired (Pri-Elem)	6sh
EDUC 441	Student Teaching-Hearing Impaired (Jr-Sr H.S.)	6sh
EDUC 442	School Law	1sh
FDED 102	American Ed in Theory and Practice	3sh

Major: 38

Required Courses:

EDEX 111	Introduction to Exceptional Persons	3sh
EDHL 114	Intro to Persons with Hearing Loss	3sh
EDHL 115	Introduction to Sign Language	1sh
EDHL 244	Intermediate Sign Language	1sh
EDHL 307	Speech for Persons with Hearing Loss	3sh (3)
EDHL 308	Language for Persons with Hearing Loss	3sh
EDHL 329	Hearing Practicum I	1sh
EDHL 330	Hearing Practicum II	1sh
EDHL 331	Advanced Sign Language	1sh
EDHL 351	Teaching Reading to Persons with Hearing Loss	3sh
EDHL 365	Parent-Preschool Programs for Persons with Hearing Loss	3sh
SPLP 222	Introduction to Audiology	3sh
SPLP 242	Speech Science I	3sh
SPLP 311	Aural Rehabilitation	3sh (3)
SPLP 334	Language Development	3sh (3)

Controlled Elective:
One course from: EDEX 112, ELED 215, HMEC 218 3sh

Free Electives: 1-2

Total Degree Requirements: 124

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(1) Program revision in process: 3 additional sh of math will be required by the Pennsylvania Department of Education.
(2) MATH 217 may substitute for EDSP 477 but may not replace MATH 151.
(3) A minimum cumulative GPA of 2.6 is required to enroll in all 300- and 400-level major courses.

Dual Certification

Students majoring in Early Childhood Education or Elementary Education may complete academic requirements for certification in Education of Persons with Hearing Loss by completing the following requirements. Students are advised that completion of requirements for a second certification will take approximately two extra semesters.

Dual Certification—Education of Persons with Hearing Loss for Majors in Early Childhood Education

EDHL 114	Intro to Persons with Hearing Loss	3sh
EDHL 115	Introduction to Sign Language	1sh
EDHL 244	Intermediate Sign Language	1sh
EDHL 307	Speech for Persons with Hearing Loss	3sh
EDHL 308	Language for Persons with Hearing Loss	3sh
EDHL 329	Hearing Practicum I	1sh
EDHL 330	Hearing Practicum II	1sh
EDHL 331	Advanced Sign Language	1sh
EDHL 365	Parent-Preschool Programs for Persons with Hearing Loss	3sh
EDUC 342	Pre-student Teaching Clinical Exp II	1sh
EDUC 421	Student Teaching (EDHL) (1)	6sh
SPLP 222	Introduction to Audiology	3sh
SPLP 311	Aural Rehabilitation	3sh

Recommended Electives:

EDHL 351	Teaching Reading to Persons with Hearing Loss	3sh
SPLP 242	Speech Science I	3sh
SPLP 334	Language Development	3sh

(1) Student Teaching Configuration—In addition to their regular requirement of 12sh in Early Childhood Education, dual certification students must do an extra 6sh placement. The recommended pattern is as follows:
- 6sh in K-3 regular classroom
- 6sh in K-3 classroom with deaf and/or hard-of-hearing pupils included
- 6sh in upper school classroom with deaf and/or hard-of-hearing pupils
- Total = 18sh inclusive for both certifications

Dual Certification—Education of Persons with Hearing Loss for Majors in Elementary Education

EDHL 114	Intro to Persons with Hearing Loss	3sh
EDHL 115	Introduction to Sign Language	1sh
EDHL 244	Intermediate Sign Language	1sh
EDHL 307	Speech for Persons with Hearing Loss	3sh
EDHL 308	Language for Persons with Hearing Loss	3sh
EDHL 329	Hearing Practicum I	1sh
EDHL 330	Hearing Practicum II	1sh
EDHL 331	Advanced Sign Language	1sh
EDHL 351	Teaching Reading to Persons with Hearing Loss	3sh
EDUC 342	Pre-student Teaching Clinical Exp II	1sh
EDUC 421	Student Teaching (EDHL) (1)	6sh
SPLP 222	Introduction to Audiology	3sh
SPLP 311	Aural Rehabilitation	3sh

Recommended Electives:

SPLP 242	Speech Science I	3sh
SPLP 334	Language Development	3sh

(1) Student Teaching Configuration—In addition to their regular requirement of 12sh in Elementary Education, dual certification students must do an extra 6sh placement. The recommended pattern is as follows:
- 6sh in a regular elementary classroom
- 6sh in an elementary classroom with deaf and/or hard-of-hearing pupils included
- 6sh in upper school classroom with deaf and/or hard-of-hearing pupils
- Total = 18sh inclusive for both certifications

College of Fine Arts

Michael J. Hood, Dean
Douglas E. Bish, Associate Dean
Website: *http://www.iup.edu/finearts*

The College of Fine Arts has professional programs in art, music, and theater and awards the Bachelor of Arts and Bachelor of Fine Arts degrees. Programs leading to certification to teach are offered in cooperation with the College of Education and Educational Technology and lead to the Bachelor of Science in Education degree. The college offers minors in art, music, theater, and dance.

With one of the largest arts programs in the commonwealth, IUP's College of Fine Arts offers members of both the university and the extended community many opportunities to learn and grow. Dedicated facilities for each department are augmented by a 1,600-seat auditorium, two theaters, two art galleries, a university museum, a recital hall, a computer laboratory, and a dance studio. Typically, the college sponsors two hundred to three hundred arts events annually, and our students, who currently enjoy the strongest academic profile of any of the university's colleges, have opportunities to develop their talents locally, regionally, nationally, and internationally through a variety of long-established field-based programs.

There are no additional college requirements for graduation beyond the university and departmental requirements listed in other sections of this catalog.

Mission Statement

The mission of the College of Fine Arts at IUP is to provide excellent programs of study for all of its majors, balancing high professional standards with rigorous and current educational practice, and to provide coursework and programs of an equally high standard in service to majors in other departments which may require arts classes and, as part of the university's general studies mandate, to the entire university student body.

The College of Fine Arts takes as its special mission the presentation of arts events including plays, concerts, exhibitions, and recitals, featuring the work of our students and faculty as well as the work of visiting arts professionals, as a gift of enrichment and as a celebration of the human spirit for the university, the community, and the region.

Finally, the college takes as its mandate and its privilege the inclusion in its presentations, studios, and classrooms the works, thoughts, and performances of a culturally and ethnically diverse world of art.

College Majors

Art (History or Studio Track)
Art Education
Interdisciplinary Fine Arts
Music (History and Literature, Performance, or Theory and Composition Track)
Music Education
Music Performance
Studio
Theater

Interdisciplinary Fine Arts Major

An interdisciplinary fine arts major program is available for those students desiring to take coursework in art, dance, communications media, fashion merchandising, interior design, music, and theater. This program is offered in conjunction with the College of Education and Educational Technology and the College of Health and Human Services. This interdisciplinary program, including an opportunity for an internship (FIAR 493), is coordinated through the Office of the Dean, College of Fine Arts, where additional information is available.

Bachelor of Arts—Interdisciplinary Fine Arts

Liberal Studies: As outlined in Liberal Studies section with the following specifications: — **53-55**
Liberal Studies Electives: no courses with FIAR prefix

Major: — **36**
Required Courses:
Coursework must combine at least three disciplines, one of which must come from the College of Fine Arts.
Controlled Electives:
Art: Art Education (ARED), Art History (ARHI), Art Studio (ART)
Music: Applied Music (APMU), Music History (MUHI). or Music (MUSC)
Theater: Any theater (THTR) courses
Dance: Any dance (DANC) courses
Communications Media: Any communications media courses (COMM)
Human Development/Environmental Studies: Interior Design (INDS), Fashion Merchandising (FSMR)

Other Requirements: — **0**
At least one-third (12) of the major credits must be in courses numbered in the 300s and 400s. No course that is used to fulfill Liberal Studies requirements may be used again to meet major requirements.

Free Electives: — **33-35**

Total Degree Requirements: — **124**

Department of Art

Vaughn H. Clay, Chairperson; Ali, Ben-Zvi, Boerner, Burwell, Ciganko, Gillham, Hedman, LaRoche, Mannikka, Matsubara, Mitchell, Nestor, Palmisano, Rode, Sherburne, Villalobos, Weiland; and professors emeriti Balsiger, Battaglini, Dongilla, Dropcho, Hamilton, Innes, McVitty, Seelhorst, Slenker, Vislosky, Wert

Website: *http://www.iup.edu/art*

The Department of Art provides both general and special courses in art, directed toward the development of the student's creative and expressive abilities. Degrees offered are the Bachelor of Arts with tracks in either Art History or Art Studio, the Bachelor of Fine Arts in Art Studio, and the Bachelor of Science in Education in Art Education. The degree in art education provides certification for teaching art in grades K-12 in the schools of Pennsylvania.

The department offers a cooperative program with the Art Institute of Pittsburgh. Students interested in commercial art, with departmental approval, may earn credit toward their major at the Art Institute.

All art majors are obligated to fulfill the university requirements for Liberal Studies. Art Education majors must maintain a 2.6 cumulative GPA, and this is a prerequisite to student teaching.

An exchange program exists between the IUP Department of Art and the National Art Academies of Slovenia and Croatia. Qualified and highly skilled juniors, first-semester seniors, and graduate students may gain participation through screening and professor nomination.

A minor in art is available, consisting of at least 18 semester hours in art courses approved by the chairperson of the Department of Art.

Acceptance by the Department of Art as a major requires the submission of a portfolio and approval of the portfolio committee. Detailed information will be sent to the applicant upon request.

Bachelor of Arts—Art/History Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: — **53-55**
Fine Arts: MUHI 101 or THTR 101
Liberal Studies Electives: no courses with ARHI prefix

Major:

Foundation Required:			**15**
ART 100	Arts of the 20th Century	3sh	
ART 111	Figure Drawing	3sh	
ART 112	Fundamentals of Drawing	3sh	
ART 113	Three-Dimension Design	3sh	
ART 114	Color and Two-Dimensional Design	3sh	
Art History Required:			**30**
ARHI 205	Ancient to Medieval Art	3sh	
ARHI 206	Renaissance to Baroque Art	3sh	
ARHI 211	Modern Art	3sh	
ARHI 222	Art in America	3sh	
ARHI 407	Medieval Art	3sh	
ARHI 408	Italian Renaissance Art	3sh	
ARHI 409	Baroque and Rococo Art	3sh	
ARHI 412	Classical Art	3sh	
ARHI 413	Senior Seminar (to be taken during senior year)	3sh	
ARHI 416	Northern Renaissance Art	3sh	
Free Electives: (1)			**24-26**
ARHI 406	Ancient Migratory Art	3sh	
ARHI 424	Art of the East	3sh	
ARHI 426	Pre-Columbian Art	3sh	
ARHI 493	Internship	3-12sh	
Total Degree Requirements:			**124**

(1) It is recommended that the student of art history make judicious choices of elective courses in consultation with the major advisor. Students may consider additional foundation or advanced studio electives, advanced art history, and related academic electives. Course selection in a foreign language is strongly recommended.

Bachelor of Arts—Art/Studio

Liberal Studies: As outlined in Liberal Studies section with the following specifications: — **50-52**
Fine Arts: Fulfilled by Art History (ARHI 205) counted in major
Liberal Studies Electives: ARHI 206; no courses with ART prefix

Major:

Foundation Required:			**15**
ART 100	Arts of the 20th Century	3sh	
ART 111	Figure Drawing	3sh	
ART 112	Fundamentals of Drawing	3sh	
ART 113	Three-Dimension Design	3sh	
ART 114	Color and Two-Dimensional Design	3sh	
Foundation Electives: (select 5 of the following 8 courses)			**15**
ART 211	Painting	3sh	
ART 213	Woodworking: Function and Form	3sh	
ART 214	Ceramics	3sh	
ART 215	Sculpture	3sh	
ART 216	Basic Metals	3sh	
ART 217	Printmaking	3sh	
ART 218	Graphic Design	3sh	
ART 219	Fibers	3sh	
Art History Required:			**9**
ARHI 205	Ancient to Medieval Art	3sh (1)	
ARHI 206	Renaissance to Baroque Art	3sh (2)	
ARHI 211	Modern Art	3sh (3)	
ARHI 413	Senior Seminar (to be taken during senior year)	3sh	
Advanced Studio Required: (4)			**21**
Advanced Studio courses to be selected from list: ART 421, 451, 452, 453, 454, 455, 457, 459, 460, 481, 493 (5)			
Free Electives:			**12-14**
Total Degree Requirements:			**124**

(1) Credits counted in Liberal Studies Fine Arts requirement.
(2) Credits counted under Liberal Studies electives.
(3) ARHI 222 may be substituted for ARHI 211.
(4) Students must complete 3sh within an advanced studio before permission will be granted to enroll in the 6sh component of the advanced level. Permission of the instructor is a prerequisite to all 6sh advanced studios.

(5) Inclusion of internship semester hours toward any portion of fulfillment of degree requirements must be approved by the departmental chair and student's major advisor. Approval must be obtained in writing prior to enrollment.

Bachelor of Fine Arts—Studio

Liberal Studies: As outlined in Liberal Studies section 50-52
with the following specifications:
Fine Arts: Fulfilled by Art History (ARHI 205) counted in major
Liberal Studies Electives: ARHI 206, no courses with ART elective

Major

Foundation Required:			15
ART 100	Arts of the 20th Century	3sh	
ART 111	Figure Drawing	3sh	
ART 112	Fundamentals of Drawing	3sh	
ART 113	Three-Dimension Design	3sh	
ART 114	Color and Two-Dimensional Design	3sh	
Foundation Electives: (Select 5 of the following 8 courses)			15
ART 211	Painting	3sh	
ART 213	Woodworking: Function and Form	3sh	
ART 214	Ceramics	3sh	
ART 215	Sculpture	3sh	
ART 216	Basic Metals	3sh	
ART 217	Printmaking	3sh	
ART 218	Graphic Design	3sh	
ART 219	Fibers	3sh	
Art History Required:			9
ARHI 205	Ancient to Medieval Art	3sh (1)	
ARHI 206	Renaissance to Baroque Art	3sh (2)	
ARHI 211	Modern Art	3sh (3)	
ARHI 413	Senior Seminar	3sh	
Advanced Studio Required: (4)			
Primary Advanced Studio Concentration			27
Minor Advanced Studio Concentration		18sh	
Courses from list: ART 421, 451, 452, 453, 454, 455, 457, 459, 460, 481, 493 (5)			
Free Electives:			6-8
(#) Total Degree Requirements:			124-126

(1) Semester hours counted in Liberal Studies Fine Arts requirement.
(2) Semester hours counted under Liberal Studies electives.
(3) ARHI 222 may be substituted for ARHI 211.
(4) The foundation-level course must be successfully completed before a student will be permitted to enroll in the 6sh component of that specific studio course. Permission of the instructor is a prerequisite to all 6sh advanced studios.
(5) Inclusion of internship semester hours toward any portion of fulfillment of degree requirements must be approved by the departmental chair and student's major advisor. Approval must be obtained in writing prior to enrollment.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Bachelor of Science in Education—Art Education (*)

Liberal Studies: As outlined in Liberal Studies section 50-52 (1)
with the following specifications:
Fine Arts: Fulfilled by Art History counted in major
Social Science: PSYC 101
Liberal Studies Electives: ARHI 206, no courses with ART prefix

College:

Professional Education Sequence: (2)			24
COMM 103	Digital Instructional Technology	3sh	
EDSP 102	Educational Psychology	3sh	
EDUC 242	Pre-student Teaching Clinical Exp I	1sh	
EDUC 342	Pre-student Teaching Clinical Exp II	1sh	
EDUC 421	Student Teaching Elementary	6sh	
EDUC 441	Student Teaching Secondary	6sh	
EDUC 442	School Law	1sh	
FDED 102	American Ed in Theory and Practice	3sh	

Major

Foundation Required:			15
ART 100	Arts of the 20th Century	3sh	
ART 111	Figure Drawing	3sh	
ART 112	Fundamentals of Drawing	3sh	
ART 113	Three-Dimension Design	3sh	
ART 114	Color and Two-Dimensional Design	3sh	
Foundation Electives: (Select 5 of the following 8 courses)			15
ART 211	Painting	3sh	
ART 213	Woodworking: Function and Form	3sh	
ART 214	Ceramics	3sh	
ART 215	Sculpture	3sh	
ART 216	Basic Metals	3sh	
ART 217	Printmaking	3sh	
ART 218	Graphic Design	3sh	
ART 219	Fibers	3sh	
Art Education Required:			9
ARED 315	Survey of Art Education	3sh	
ARED 317	Art Education Methodology at the Elementary Level	3sh	
ARED 318	Art Education Methodology at the Secondary Level	3sh	
Art History Required:			9
ARHI 205	Ancient to Medieval Art	3sh (3)	
ARHI 206	Renaissance to Baroque Art	*sh (4)	
ARHI 211	Modern Art	3sh (5)	
ARHI 413	Senior Seminar	3sh	
Controlled Electives:			12
Additional courses from lists: (6)			
Advanced Studio: ART 421, 451, 452, 453, 454, 455, 457, 459, 460			
Advanced Art History: ARHI 219, 222, 406, 408, 409, 412, 416, 424, 426			
Art Education Elective: ARED 330			
Free Electives:			0
(#) Total Degree Requirements:			134-136

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(1) Program revision in process – 3 additional sh of math will be required by the Pennsylvania Department of Education.
(2) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EDEX 301 (2sh).
(3) Semester hours counted in Liberal Studies Fine Arts requirement.
(4) Semester hours counted under Liberal Studies electives.
(5) ARHI 222 may be substituted for ARHI 211.
(6) Courses can only be taken following successful completion of the foundation prerequisite course.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Department of Music

Lorraine P. Wilson, Chairperson: Bird, Chepaitis, Dearing, Dickinson, Dietz, Eisensmith, Ferguson, Fry, Godt, Hastings, Jennings, Kauffman, Kuehn, Lloyd, Mantel, Martynuik, McBride, Olmstead, Perlongo, Radell, Sartori, Scandrett, Stamp, Staples, Thorell, Wacker, Wheatley, Worzbyt, Young; and professors emeriti Adams, Becker, Borst, DiCicco, Intili, Malitsky, Perkins, Vansteenkist, Weber

Website: *http://www.iup.edu/music*

The Department of Music has a threefold mission: (1) professional preparation of music educators, performers, composers, conductors, and musicologists, (2) liberal studies for the university, and (3) programs, education, and resources of music for the community. Degrees offered include the Bachelor of Arts, Bachelor of Fine Arts, and Bachelor of Science in Education.

Admission to the Music Department requires satisfactory completion of an audition in addition to the university general requirements. Detailed information will be sent to the applicant upon request.

A student wishing to minor in music must elect a minimum of 15 semester hours in music courses as approved by the department chairperson. The program leading to the Bachelor of Arts in Music has been designed to give the student a general experience in music. The student seeking this degree has the choice of three tracks: Music History/Literature, Music Theory/Composition, or Performance.

The program leading to the Bachelor of Fine Arts in Music (equivalent to the Bachelor of Music Degree) is a special program with a major in one of twenty-one areas of performance. The student in this program prepares to pursue a career as a professional performing musician.

The program leading to the Bachelor of Science in Education with a music major leads to certification to teach in the schools of Pennsylvania.

Special Requirements

1. Each student must declare a primary performing medium. Those who elect voice as their primary instrument normally elect piano as a secondary instrument. Performance juries are held at the end of each semester. Students are expected to complete the requirements for their performing area and level. Piano proficiency is required in all degree programs.
2. Ensemble participation of 5 hours a week is required each semester. Students may fulfill this departmental requirement by participation in either 1-semester-hour or 0-semester-hour ensemble(s). In meeting the degree requirements of 7-8 semester hours of ensemble credit, enrollment in credit-bearing ensembles is flexible across semesters.
3. Students must register for MUSC 475 (Music Lab) and attend (1) all department and area recitals and (2) eight campus recitals and concerts each semester in attendance.

Bachelor of Arts—Music/History and Literature Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: — **53-55**
Mathematics: MATH 101 recommended
Fine Arts: MUHI 101
Liberal Studies Electives: HIST 305, no courses with MUHI prefix

Major: — **41**
Required Courses:

MUHI 301	Music History I	3sh
MUHI 302	Music History II	3sh
MUSC 111	Theory Skills I	2sh
MUSC 112	Theory Skills II	2sh
MUSC 115	Theory I	3sh
MUSC 116	Theory II	3sh
MUSC 211	Theory Skills III	2sh
MUSC 212	Theory Skills IV	2sh
MUSC 215	Theory III	3sh
MUSC 216	Theory IV	3sh

Controlled Electives: — 15sh
Five courses from this list: MUHI 320, 321, 322, 323, 324, 325, 326, 420, 421

Other Requirements: — **15**

Music Ensembles (MUSC 120-136)	8sh
Music Electives	7sh
Jury Clearance in piano C	0sh
Attendance at 8 recitals per semester (MUSC 475, S grade)	0sh

Free Electives: — **13-15**

Total Degree Requirements: — **124**

Bachelor of Arts—Music/Music Performance Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: — **53-55**
Mathematics: MATH 101 recommended
Fine Arts: MUHI 101
Liberal Studies Electives: HIST 305, MUHI 301, no courses with MUSC prefix

Major: — **42**
Required Courses:

MUSC 111	Theory Skills I	2sh
MUSC 112	Theory Skills II	2sh
MUSC 115	Theory I	3sh
MUSC 116	Theory II	3sh
MUSC 211	Theory Skills III	2sh
MUSC 212	Theory Skills IV	2sh
MUSC 215	Theory III	3sh
MUSC 216	Theory IV	3sh

Controlled Electives:
Applied Music I through VIII: private lessons in performance area–2sh each of eight semesters — 16sh
Major related:

MUHI 103	Perspectives in Jazz	3sh
MUHI 302	Music History II	3sh

Other Requirements: — **14**

Music ensembles (MUSC 120-136)	8sh
Music electives, with advisor approval	6sh
Jury clearance in major instrument, minor instrument (if any), and piano (if not major or minor instrument)	0sh
Attendance at 8 recitals per semester (MUSC 475, S grade)	0sh

Free Electives: — **13-15**

Total Degree Requirements: — **124**

Bachelor of Arts—Music/Theory and Composition Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: — **53-55**
Mathematics: MATH 101 recommended
Fine Arts: MUHI 101
Liberal Studies Electives: HIST 305, MUHI 301, no courses with MUSC prefix

Major: — **54**
Required Courses:

MUSC 111	Theory Skills I	2sh
MUSC 112	Theory Skills II	2sh
MUSC 115	Theory I	3sh
MUSC 116	Theory II	3sh
MUSC 211	Theory Skills III	2sh
MUSC 212	Theory Skills IV	2sh
MUSC 215	Theory III	3sh
MUSC 216	Theory IV	3sh
MUSC 217	Keyboard Harmony I	1sh
MUSC 218	Keyboard Harmony II	1sh
MUSC 306	Counterpoint I	2sh
MUSC 315	Theory V	3sh
MUSC 411	Composition I	2sh
MUSC 412	Composition II	2sh
MUSC 413	Composition III	2sh
MUSC 414	Composition IV	2sh

Controlled Electives:		
One from list: MUSC 304, 307, 309	2sh	
Applied Music I-VII: Private lessons in performance area 2sh each of seven semesters	14sh	
Major related: MUHI 302	3sh	
Other Requirements:		8
Music ensembles (MUSC 120-136)	8sh	
Jury clearance in major instrument, minor instrument (if any), and piano B	0sh	
Attendance at 8 recitals per semester (MUSC 475, S grade)	0sh	
Free Electives:		7-9
Total Degree Requirements:		124

Bachelor of Fine Arts—Music Performance

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Mathematics:** MATH 101 recommended **Fine Arts:** MUHI 101 **Liberal Studies Electives:** HIST 305, MUHI 301, no courses with MUSC prefix		53-55
Major:		55
Required Courses:		
MUSC 111 Theory Skills I	2sh	
MUSC 112 Theory Skills II	2sh	
MUSC 115 Theory I	3sh	
MUSC 116 Theory II	3sh	
MUSC 211 Theory Skills III	2sh	
MUSC 212 Theory Skills IV	2sh	
MUSC 215 Theory III	3sh	
MUSC 216 Theory IV	3sh	
Controlled Electives:		
Applied Music I through VIII: private lessons in performance area 4sh each of 8 semesters	32sh	
Major related: MUHI 302	3sh	
Other Requirements:		20
Music ensembles (MUSC 120-136)	8sh	
Music electives 12sh (1)		
Jury clearance in major instrument, minor instrument (if any), and piano C (unless major or minor)	0sh	
Attendance at 8 recitals per semester (MUSC 475, S grade)	0sh	
Junior and Senior Recitals	0sh	
Free Electives:		0
(#) Total Degree Requirements:		128-130

(1) Majors with piano or organ performance specialization must elect MUSC 217 and 218, 1sh each.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Bachelor of Science in Education—Music Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Mathematics:** MATH 101 recommended (1) **Fine Arts:** MUHI 101 **Social Science:** PSYC 101 **Liberal Studies Electives:** BTED/COSC/IFMG 101, HIST 305, MUHI 301, no courses with MUSC prefix		53-55
College:		31
Professional Education Sequence:		
EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings	2sh	
EDSP 102 Educational Psychology	3sh	
EDUC 242 Pre-student Teaching Clinical Exp I	1sh	
EDUC 342 Pre-student Teaching Clinical Exp II	1sh	
EDUC 421 Student Teaching Elementary Level	6sh	
EDUC 441 Student Teaching Secondary Level	6sh	
EDUC 442 School Law	1sh	
FDED 102 American Ed in Theory and Practice	3sh	
MUSC 240 Technology in the Music Classroom	2sh	
MUSC 331 Elementary Methods	3sh	
MUSC 333 Secondary Methods	3sh	
Major:		49
Required Courses:		
MUSC 111 Theory Skills I	2sh	
MUSC 112 Theory Skills II	2sh	
MUSC 115 Theory I	3sh	
MUSC 116 Theory II	3sh	
MUSC 151 Class Voice I	1sh (2)	
MUSC 152 Class Voice II	1sh (2)	
MUSC 153 Class Piano I	1sh (3)	
MUSC 154 Class Piano II	1sh (3)	
MUSC 155 Class Strings I	1sh	
MUSC 157 Class Percussion I	1sh	
MUSC 159 Class Brass I	1sh	
MUSC 161 Class Woodwinds I	1sh	
MUSC 211 Theory Skills III	2sh	
MUSC 212 Theory Skills IV	2sh	
MUSC 215 Theory III	3sh	
MUSC 216 Theory IV	3sh	
MUSC 311 Fundamentals of Conducting	2sh	
Controlled Electives:		
One from list: MUSC 312 or 313	2sh	
Applied Music I through VII: private lesson in Performance area-2sh each of 7 semesters	14sh	
Major related: MUHI 302	3sh	
Other Requirements:		7
Music Ensembles (MUSC 120-136)	7sh	
Jury clearance in major instrument, minor instrument (if any), and piano C (unless major or minor)	0sh	
Attendance at 8 recitals per semester (MUSC 475, S grade)	0sh	
Free Electives:		0
(#) Total Degree Requirements:		140-142

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(1) Program revision in process 3 additional sh of math will be required by the Pennsylvania Department of Education.
(2) For majors with voice as performance specialization, any three of the following may be substituted: MUSC 351, 353, 354, 406.
(3) Private Piano I and II (APMU 101, 151) may be substituted.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Department of Theater and Dance

Barbara S. Blackledge, Chairperson; Ault, Boda, Bowes, Jones, McCreary, Simpson, J. Van Dyke; and professors emeriti Eisen, Lommock

Website: *http://www.iup.edu/theater*

The Department of Theater and Dance is dedicated to both theater and dance as collaborative and highly disciplined fine arts which demand an education that offers an extended view of the world as a part of a liberal and humanistic education. Successful students develop an artistic sensibility and a disciplined work ethic, skills necessary in most endeavors. The department is committed to:

1. providing comprehensive coursework from introductory through advanced levels of study, in all major areas of theater and dance
2. providing diverse production opportunities at all levels to develop students as artists by developing proficiency in one or more of the areas of playwriting, research, performance, and production while stimulating the intellectual growth of both students and faculty
3. augmenting and complementing the aesthetic offerings of the university community
4. establishing a work ethic of collaboration, personal discipline, and respect

The Department of Theater and Dance offers a Bachelor of Arts degree, a dance minor, and a theater minor. The B.A. in Theater provides for the study of theater within a broad liberal arts education. The minor in dance totals 18 controlled semester hours, while a minor in theater consists of 15 semester hours in coursework approved by the chairperson of the department. Theater and dance courses are also an option in the Interdisciplinary Fine Arts degree offered by the College of Fine Arts.

As a practical extension of the academic program, the Department of Theater and Dance offers a variety of production opportunities in the Theater-by-the-Grove Mainstage and Studio theaters. The IUP Dance Theater performs twice annually, and the department has a professional theater company, Keystone Repertory Theater, to offer students summer options.

Admission to the Theater program requires satisfactory completion of an audition or interview, in addition to the university's general admission requirements. Detailed information will be sent to applicants upon request.

The Department of Theater and Dance is an accredited institutional member of the National Association of Schools of Theater (NAST).

Bachelor of Arts—Theater

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Fine Arts:** ARHI 101, DANC 102, or MUHI 101 **Liberal Studies Electives:** no courses with THTR prefix			**53-55**
Major:			**36**
Required Courses:			
THTR 110	Script Analysis	3sh	
THTR 116	Fundamentals of Theatrical Design	3sh	
THTR 201	Theater History I	3sh	
THTR 202	Theater History II	3sh	
THTR 301 *or* 302	Tragic Mask or Comic Mask	3sh	
THTR 310	Theater Criticism	3sh	
Any three of the following:			
THTR 120	Stagecraft I	3sh	
THTR 122	Costume Workshop	3sh	
THTR 221	Basic Stage Lighting	3sh	
THTR 223	Makeup for the Stage	3sh	
Any three of the following:			
THTR 130	Stage Voice	3sh	
THTR 131	Stage Movement *or*		
DANC 150	Fundamentals of Dance	3sh	
THTR 240	Acting I	3sh	
THTR 350	Directing	3sh	
Other Requirements:			**4**
THTR 486	Practicum in Production (minimum of 6 semesters)	4sh	
Free Electives:			**29-31**
Total Degree Requirements:			**124**

Dance Minor

The Dance Minor program provides a foundation for those interested in teaching dance, working with a dance company, managing a private dance studio, working with theater productions, or desiring a broad-based education within the dance discipline.

The Dance Minor is an 18 semester-hour program with 9 required semester hours and 9 elective semester hours. The required semester hours include the pertinent foundation courses and higher-level theory courses. The required courses also provide design elements of production, fundamental and historical theories of dance, and dance choreographic and teaching theories that cannot be obtained in any of the elective courses. The elective semester hours include the technique courses.

The Dance Minor is based on the National Standards for Arts Education dance requirements. Using this basis for the program ensures fundamental preparation for a number of student needs, for example: the dance teacher, the performer, and/or the dance studio owner.

The program is also designed to fulfill the needs of a Liberal Arts minor in dance. Through advisement, the minor program can serve the individual student's needs. The program would be of interest to secondary and elementary education majors, small business majors, recreation and physical education majors, and anyone else who has an interest in dance and wants to broaden his or her Liberal Arts education.

Minor—Dance (1)			**18**
Required Courses:			**9**
THTR 116	Fundamentals of Theatrical Design	3sh	
One of the following:			
DANC 102	Introduction to Dance	3sh	
DANC 150	Fundamentals of Dance	3sh	
One of the following:			
DANC 351	Choreography	3sh	
DANC 353	Dance Curriculum and Instruction	3sh	
Any three of the following as advised:			9
DANC 150	Fundamentals of Dance	3sh	
DANC 250	Contemporary Dance	3sh	
DANC 260	Jazz Dance	3sh	
DANC 270	Ballroom and Tap Dance	3sh	
DANC 280	Ballet	3sh	
DANC 290	Ethnic Dance	3sh	
DANC 485	Dance Studio	3sh	

(1) The Dance Minor consists of 18sh. Fundamentals of Dance cannot be counted twice.

College of Health and Human Services

Carleen C. Zoni, Dean
Kathleen M. Rourke, Associate Dean
Website: *http://www.iup.edu/healthhumanserv*

The College of Health and Human Services comprises eight multifaceted departments which offer programs leading to seventeen baccalaureate degrees and five master's degrees, three minors, two credit-bearing certificate programs, and one noncredit certificate program. The departments in the college are Culinary Arts; Food and Nutrition; Health and Physical Education; Hotel, Restaurant, and Institutional Management; Human Development and Environmental Studies; Industrial and Labor Relations; Nursing and Allied Health Professions; and Safety Sciences.

The college offers degrees in areas relevant to workforce needs and prides itself on having established a learning-centered environment in which the curricula bridge theory and practice. Hands-on fieldwork, observations, clinical experiences, internships, cooperative education, and service-learning opportunities are regular components of the curricula and provide valuable learning experiences for students. Instructional methods are often cooperative and collaborative, affording students the opportunity to understand what they can contribute to and gain from collective efforts. Discovery-based instruction provides opportunities to learn about a discipline by practicing in the field. Media technology, an ever-expanding resource, provides access to worldwide information. Faculty members recognize the central role of the learner in the learning process and strive to create integrated, holistic learning environments. The focus on learning is a commitment to the continuous improvement of the quality of education offered by the college.

The College of Health and Human Services is committed to providing students with challenging academic programs designed to enhance achievement of educational and professional goals, to develop appropriate skills and attitudes for future employment, to develop critical thinking skills, and to promote synthesis of knowledge. Students are encouraged to develop an understanding of and respect for individuals from diverse backgrounds and cultures.

College Majors

Child Development/Family Relations
Consumer Affairs
Consumer Services/Community Services Track
Culinary Arts (nondegree Certificate program)
Dietetics
Family and Consumer Sciences Education
Fashion Merchandising
Food and Nutrition Science
Health and Physical Education
Hotel, Restaurant, and Institutional Management
Industrial and Labor Relations (graduate program only)
Interior Design
Medical Technology
Nuclear Medicine Technology
Nursing
Physical Education and Sport
Respiratory Care
Safety Sciences

College Minors

Child Development
Nutrition
Safety Sciences

Credit Certificate Programs

Driver Education
Gerontology

Department of Culinary Arts

Albert S. Wutsch, Chairperson; Blake, DeMane, Brown, Fitting, Klinger, Pike, Wygonik

Website: *http://www.iup.edu/culinary*

The Department of Culinary Arts offers a four-semester (sixteen calendar months), competency-based, noncredit certificate program. This distinctive program provides hands-on learning experiences, including fundamental culinary theory and on-the-job work experience, giving each student the necessary skills and knowledge to begin a successful career in the field of culinary arts. During the last semester of study, students are placed with a distinguished employer in a prestigious resort or restaurant for a paid externship experience. This contemporary approach to learning enables students to achieve advanced levels of proficiency in both culinary techniques and business management skills while they advance through the certificate program. Through internal articulation agreements, graduates may transfer up to 42 semester hours of coursework toward a baccalaureate degree in Hotel, Restaurant, and Institutional Management and up to 37 semester hours toward a Bachelor of Science degree in Nutrition. In addition, an optional summer European Study Tour is offered through which students may earn 3 semester hours.

The Culinary program holds accreditation by the American Culinary Federation Educational Institute.

This program is offered at the Academy of Culinary Arts in Punxsutawney, Pennsylvania.

Department of Food and Nutrition

Joanne B. Steiner, Chairperson; Barker, Cessna, Dahlheimer, Johnson, Taylor-Davis, Wagoner; and professor emerita Minnick

Website: *http://www.iup.edu/foodnutrition*

The Department of Food and Nutrition offers a degree program in nutrition with two tracks, dietetics and general nutrition. Within the degree program, students will also select a natural science option dependent upon their academic preparation and career goals. This curriculum prepares students as professionals for a diversity of career opportunities in health care, food service, the food industry, and food and nutrition research.

In addition, the department provides Liberal Studies courses which are available to all university students. These include FDNT 143, an option in the university's Liberal Studies requirements for Health and Wellness; FDNT 145, a Liberal Studies elective; and LBST 499 Food and Culture, a synthesis course.

Dietetics Track

Students who complete the Dietetics Track (Didactic Program in Dietetics, [DPD]) meet the academic requirements as accredited by the Commission on Accreditation for Dietetics Education of the American Dietetic Association. This track will prepare an individual to serve as a translator of food and nutrition science information for members of the larger community with respect to healthful food preparation, healthy eating behaviors, medical nutrition therapy, management of nutrition delivery and food service systems, and advocacy for the profession of dietetics. The individual who completes this program will exhibit an in-depth knowledge of food, nutrition, behavioral sciences, and management theory. The student will also be able to apply this knowledge to solve problems.

Nutrition Track

The Nutrition Track will allow the student to plan a curriculum based upon career goals other than becoming a registered dietitian with the American Dietetic Association. Career opportunities for these students include public health, food service administration, culinary arts, journalism, communications, business, and gerontology.

Students who wish to pursue preparation for master's level education in food and nutrition research, with the selection of the Natural Science Option II plus the nutrition track would acquire a background in the basic sciences that gives a solid foundation for theoretical and applied food science and nutrition. These options meet the needs of students who wish to enter careers in food/nutrition which require a graduate education.

Nutrition Minor

This minor sequence is recommended for students majoring in the related health disciplines such as child development, family and consumer sciences education, nursing and allied health, food service management, and health and physical education. Students electing a minor in nutrition must complete 15 semester hours of coursework from the courses listed in the requirements for the minor. Students must note that the completion of this minor neither meets the requirements for practice as a credentialed nutritionist nor satisfies the academic requirements of the Commission on Registration for the American Dietetic Association as a registered dietitian. For additional information about these careers, contact the Food and Nutrition Department.

Bachelor of Science—Nutrition/Dietetics Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			**54**
Health and Wellness: HPED 143			
Mathematics: MATH 217			
Natural Science: CHEM 101-102 or 111-112			
Social Science: ECON 101 or 121, PSYC 101, SOC 151			
Liberal Studies Electives: BTED/COSC/IFMG 101; HMEC 218 or PSYC 310, no courses with FDNT prefix			
Major:			
Food and Nutrition Core:			**25**
FDNT 110	Careers in Food and Nutrition	1sh	
FDNT 150	Foods	3sh	
FDNT 151	Foods Laboratory	1sh	
FDNT 212	Nutrition	3sh	
FDNT 213	Life Cycle Nutrition	3sh	
FDNT 355	Nutrition in Disease I	3sh	
FDNT 362	Experimental Foods	3sh	
FDNT 458	Advanced Human Nutrition	4sh	
FDNT 470	Human Food Consumption Patterns	3sh	
FDNT 484	Senior Seminar	1sh	
Controlled Electives:			**28**
Dietetics Track:			
FDNT 364	Methods of Teaching	3sh	
FDNT 402	Community Nutrition	3sh	
FDNT 430	Professional Topics in Food and Nutrition	3sh	
FDNT 455	Nutrition in Disease II	3sh	
FDNT 463	Nutrition Counseling	3sh	
HRIM 259	Hospitality Purchasing	3sh	
HRIM 313	Food Systems I	4sh	
HRIM 356	Human Resources in Hospitality Industry	3sh	
MGMT 310	Principles of Management	3sh	
Other Requirements:			**13 or 21**
Natural Science Sequence: One option required:			
Natural Sciences Option I:			
BIOL 105, 155, 232, CHEM 255		13sh	
Natural Sciences Option II: (1)			
BIOL 105, 150, 151, 232, CHEM 231, 351		21sh	
Free Electives:			**0-4**
Total Degree Requirements:			**124-128**

(1) Provides the student with entrance requirements for graduate education in food and nutrition science.

Bachelor of Science—Nutrition/Nutrition Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	**54**
Health and Wellness: HPED 143	
Mathematics: MATH 217	
Natural Science: CHEM 101-102 or 111-112	
Social Science: ECON 101 or 121, PSYC 101, SOC 151	
Liberal Studies Electives: (1) BTED/COSC/IFMG 101, HMEC 218 or PSYC 310, no courses with FDNT prefix	

Major:			**25**
Food and Nutrition Core:			
FDNT 110	Careers in Food and Nutrition	1sh	
FDNT 150	Foods	3sh	
FDNT 151	Foods Laboratory	1sh	
FDNT 212	Nutrition	3sh	
FDNT 213	Life Cycle Nutrition	3sh	
FDNT 355	Nutrition in Disease I	3sh	
FDNT 362	Experimental Foods	3sh	
FDNT 458	Advanced Human Nutrition	4sh	
FDNT 470	Human Food Consumption Patterns	3sh	
FDNT 484	Senior Seminar	1sh	
Controlled Electives:			**10-28**
Nutrition Track (non-DPD):			
FDNT electives (300 level and above, internship of 3sh strongly recommended)		6sh	
Program minor, certificate, second major, or core concentration required for program completion (2)		4-22sh	
Other Requirements:			**13 or 21**
Natural Science Sequence: One option required:			
Option I: BIOL 105, 155, 232, CHEM 255		13sh	
Option II: (3) BIOL 105, 150, 151, 232, CHEM 231, 351		21sh	
Free Electives:			**0-22**
Total Degree Requirements:			**124-128**

(1) For the Gerontology Certificate, PHIL 405 or 400 or PSYC 378 can be applied as a Liberal Studies Elective. For the Business Administration minor, ECON 122 can be applied as a Liberal Studies Elective.

(2) Select from list (see catalog for requirements): Business Administration, Chemistry, Communications Media, Culinary Arts, Educational Technology, Gerontology, Journalism, Natural Sciences, Psychology, and Psychology Science
or Hotel, Restaurant, and Institutional Management (FDNT 150, 151, HRIM 101, 259, 306, 313, 356, 401, HRIM 3sh elective)
or Physical Education and Sport (HPED 319, 410, 411, HPED 481American College of Sports Medicine, Health Fitness Instructors Workshop, and HPED 343 or 375 or 412)

(3) Provides the student with entrance requirements for graduate education in food and nutrition science.

Minor—Nutrition			**15**
FDNT 212	Nutrition	3sh	
FDNT 213	Life Cycle Nutrition	3sh	
FDNT 245	Sports Nutrition	3sh (1)	
FDNT 355	Nutrition in Disease I	3sh	
FDNT 470	Human Food Consumption Patterns or	3sh	
FDNT 402	Community Nutrition		

(1) Students not interested in FDNT 245 could select both FDNT 402 and 470 in place of FDNT 245.

Department of Health and Physical Education

James G. Mill, Chairperson; Alman, Bayles, Black, Blacksmith, Blair, Celtnieks, Clark, Cortazzo, Dicicco, Klingaman, Kostelnik, McKee, Montgomery, Moore, Rivera, Robinson, Sloniger, Smith, Temes, Trenney; and professors emeriti Aierstock, Beck, Clark, Dakak, Davis, Dickie, Eltz, Godlasky, Grove, Hornfeck, Liscinsky, Neal, Sledzik, Sloniger, Sutton, Tucker

Website: *http://www.iup.edu/healthphysed*

The Department of Health and Physical Education provides the following services:

1. instruction in health and wellness courses as part of the university's Liberal Studies requirement
2. instruction in health and physical education courses as Physical Education course electives
3. an undergraduate major in health and physical education that leads to the Bachelor of Science degree in Education with potential certification to teach in the Commonwealth of Pennsylvania
4. Bachelor of Science degree in Physical Education and Sport
5. Certification program in Driver Education

Required Program–Liberal Studies

The Department of Health and Physical Education through its Health and Wellness course in the Liberal Studies program seeks to enhance the overall well-being of students through instruction planned to promote and maintain desirable levels of physical, mental, emotional, and social well-being. Self responsibility in the following dimensions of wellness is emphasized: nutritional awareness, stress awareness and management, exercise and fitness, substance use and abuse, and sexually transmitted diseases/AIDS. The importance of reducing risk factors for chronic degenerative disease and managing lifestyle factors for promotion of health is presented with implication for both the present and future. Information is provided during class lectures and enhanced by a variety of practical learning experiences which give students opportunities for self-assessment and personal application of the subject matter.

In addition, the department offers a variety of 1-semester-hour activity courses focusing on physical fitness and the development of skills essential for recreation and lifetime sports. Instruction is offered in many activities including golf, resistive exercise, scuba, swimming, and tennis.

The university's Liberal Studies requirements, in effect since fall, 1989, require that each student successfully complete HPED 113 or its alternate, FDNT 143. Students may also elect to take 4 semester hours of the ROTC program (MLSC 101-102) as an alternate to the wellness courses. Activity courses will continue to be offered, although they are no longer required. It is encouraged and recommended that students choose these courses as elective credits.

Bachelor of Science Degree–Physical Education and Sport

The Bachelor of Science degree in Physical Education and Sport provides greater emphasis on subject matter/content and less on pedagogy. Students who select this major generally apply their knowledge in the areas of exercise science, community and corporate fitness, cardiac rehabilitation, sports medicine, and/or executive fitness programming. The sports study major is a non-teacher certification program. Students enrolled in this program may be required to purchase a personal liability insurance policy. This will be necessary before beginning the preprofessional experience, the internship, or any other clinical experience on or off campus.

Specialty tracks have been developed for the degree program in physical education and sport. These different tracks provide emphasis in specific subject content areas and teach skills necessary for students to assume leadership roles in careers in the health and fitness industry as well as the sport science industry. These include:

a. Aquatics
b. Exercise Science
c. Sport Administration
d. Athletic Training

These four tracks, in addition to the Nutrition minor within the Physical Education and Sport major, provide students with an innovative, relevant, and challenging curriculum and at the same time encourage the promotion of interdisciplinary work. Course content is focused toward specific professions within the major, as well as toward different national credentialing possibilities. Student internships and preprofessional experiences can be more appropriately focused to enhance opportunities for postgraduate employment.

Selection of a predetermined number of students to the Athletic Training Track will be based on demonstrated academic achievement and the evaluation of other criteria as listed below. The minimum standards for eligibility are: 1) sophomore status (minimum of 28 semester hours), 2) no less than a 2.6 cumulative GPA, 3) no less than a grade of C in HPED 142, 175, 221, and 251, 4) two letters of recommendation, 5) satisfactory completion of 50 hours of directed clinical observation, 6) a written essay, and in some cases, a personal interview. Official admission is also contingent upon obtaining liability insurance, medical clearances, and Acts 34 and 151 clearances, all of which are needed for field experience placement. Once

admitted, students must continue to demonstrate above-average academic performance and acceptable clinical performance in order to remain in good standing (specific program retention and completion guidelines will apply and are described in informational/admissions packet available from the department). Students should obtain an informational and admissions packet from the department for full details.

Bachelor of Science in Education Degree–Health and Physical Education

Requirements for the degree of Bachelor of Science in Education with a major in Health and Physical Education include the university's Liberal Studies requirements, Professional Education requirements, and the Health and Physical Education core requirement. Upon completion of the degree program and successfully passing the PRAXIS Exam, the student is qualified for an Instructional I Certificate in Health and Physical Education, issued by the Pennsylvania Department of Education in Harrisburg. This certificate is valid for teaching health and physical education in grades K-12 for three years in the public schools of Pennsylvania. All students seeking Pennsylvania certification must follow the 3-Step Process described in the section "Admission to Teacher Education and Certification" found in the College of Education and Educational Technology section of this catalog.

Health and Physical Education Core

The Health and Physical Education curriculum identifies a required core of studies which emphasizes a body of knowledge relevant to the study of professional health and physical education, as well as the study of physical education and sport. Courses contained in the core are those which are intended to enable students to identify and solve problems by applying relevant knowledge and also to engage in self-directed learning.

Candidates for the degree program in Health and Physical Education must demonstrate acceptable cognitive and psychomotor qualifications as well as desirable character and personality traits. The professional program seeks to foster those qualities of individual character and competence that are inherent in personal and professional maturity. These competencies are evaluated at the end of the sophomore year. The student is either granted Advanced Standing in the department or restricted in scheduling advanced courses for not less than one probationary semester. Continuation in the major program is based upon attainment of department Advanced Standing.

Driver Education

Candidates for the driver education certification must possess, or be a candidate for, a valid Pennsylvania certificate in any area of certification. A student must currently complete the following four courses: HPED 251, 252, 353, and 354. Students must request the certificate in driver education when they apply for graduation. For students who have already graduated, contact the Office of the Dean, College of Education and Educational Technology, for correct procedures.

Aquatics School Course Offerings

Each summer the department offers the annual Aquatics School. Students attending must possess the necessary aquatic prerequisites. A fee will be charged. All courses may be taken for college credit, if the student is eligible and pays the additional tuition fee. For more information, contact the aquatic director.

Bachelor of Science—Physical Education and Sport

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54-55**
Mathematics: MATH 217
Health and Wellness: FDNT 143 or MLSC 101-102
Natural Science: BIOL 103-104 or CHEM 101-102
Social Science: PSYC 101, SOC 151
Liberal Studies Electives: FDNT 145, BTED/COSC/IFMG 101, no courses with HPED prefix

Major:
Core Requirements: **31**

HPED 142	Foundations of Health, Physical Education, and Sport	3sh
HPED 200	Fundamentals of Physical Activity	1sh
HPED 210	Motor Development	2sh
HPED 221	Human Structure and Function	3sh
HPED 251	Foundations of Safety and Emergency Health Care	3sh
HPED 263	Aquatics	1sh
HPED 315	Biomechanics	3sh
HPED 341	Evaluation in Health and Physical Ed	3sh
HPED 343	Physiology of Exercise	3sh
HPED 344	Adapted Physical Education	3sh
HPED 441	Psychosocial Implications for Health and Physical Education	3sh
HPED 442	Seminar in Health, Physical Education, and Recreation I	3sh

Professional Requirements: **15-17**

HPED 175	Prevention and Care of Injuries to the Physically Active	2sh
HPED 319	Preprofessional Exp II	1-3sh
HPED 375	Physiological Basis of Strength Training	3sh
HPED 410	Exercise Prescription	3sh
HPED 411	Physical Fitness Appraisal	3sh
HPED 412	Physical Activity and Stress Mgmt	3sh

Controlled Electives: (1) (2) **6-12**
BIOL 151, 155, HPED 408, 413, 426, 482, 493

Free Electives: **12-18**

Total Degree Requirements: **124**

(1) Nutrition minor may substitute for Controlled Electives; see Department of Food and Nutrition.
(2) Specialty tracks will substitute for Controlled Electives; see following descriptions.

Bachelor of Science—Physical Education and Sport–Exercise Science Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54-55**
Mathematics: MATH 217
Health and Wellness: FDNT 143 or MLSC 101-102
Natural Science: BIOL 103-104 or CHEM 101-102
Social Science: PSYC 101, SOC 151
Liberal Studies Electives: BTED/COSC/IFMG 101, FDNT 145, no courses with HPED prefix

Major: **31**
Core Requirements:

HPED 142	Foundations of Health, Physical Education, and Sport	3sh
HPED 200	Fundamentals of Physical Activity	1sh
HPED 210	Motor Development	2sh
HPED 221	Human Structure and Function	3sh
HPED 251	Foundations of Safety and Emergency Health Care	3sh
HPED 263	Aquatics	1sh
HPED 315	Biomechanics	3sh
HPED 341	Evaluation in Health and Physical Ed	3sh
HPED 343	Physiology of Exercise	3sh
HPED 344	Adapted Physical Education	3sh
HPED 441	Psychosocial Implications for Health and Physical Education	3sh
HPED 442	Seminar in Health, Physical Education, and Recreation I	3sh

Sport Science Requirements: **12-14**

HPED 175	Prevention and Care of Injuries to the Physically Active	2sh
HPED 319	Preprofessional Experience II	1-3sh
HPED 375	Physiological Basis of Strength Training	3sh
HPED 410	Exercise Prescription	3sh
HPED 412	Physical Activity and Stress Mgmt	3sh

Exercise Science Track:			14
BIOL 151	Human Physiology	4sh	
HPED 411	Physical Fitness Appraisal	3sh	
HPED 413	Physical Activity and Aging	3sh	
PHYS 151	Medical Physics Lecture	3sh	
PHYS 161	Medical Physics Lab	1sh	
Free Electives:			10-13
Total Degree Requirements:			124

Bachelor of Science—Physical Education and Sport–Sport Administration Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			54-55
Mathematics: MATH 217			
Health and Wellness: FDNT 143 or MLSC 101-102			
Natural Science: BIOL 103-104 or CHEM 101-102			
Social Science: PSYC 101, ECON 121			
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122, no courses with HPED prefix			
Major:			31
Core Requirements:			
HPED 142	Foundations of Health, Physical Education, and Sport	3sh	
HPED 200	Fundamentals of Physical Activity	1sh	
HPED 210	Motor Development	2sh	
HPED 221	Human Structure and Function	3sh	
HPED 251	Foundations of Safety and Emergency Health Care	3sh	
HPED 263	Aquatics	1sh	
HPED 315	Biomechanics	3sh	
HPED 341	Evaluation in Health and Physical Ed	3sh	
HPED 343	Physiology of Exercise	3sh	
HPED 344	Adapted Physical Education	3sh	
HPED 441	Psychosocial Implications for Health and Physical Education	3sh	
HPED 442	Seminar in Health, Physical Education, and Recreation I	3sh	
Sport Science Requirements:			14-16
HPED 175	Prevention and Care of Injuries to the Physically Active	2sh	
HPED 319	Preprofessional Experience II	1-3sh	
HPED 333	Psychology of Coaching	2sh	
HPED 335	Coaching and Managing of Athletic Programs	3sh	
HPED 375	Physiological Basis of Strength Training	3sh	
HPED 412	Physical Activity and Stress Mgmt	3sh	
or HPED 430	The American Woman and Sport	3sh	
Business Minor Requirements:			21
ACCT 201	Accounting Principles I	3sh	
ACCT 202	Accounting Principles II	3sh	
BTST 321	Business and Interpersonal Comm	3sh	
BLAW 235	Legal Environment of Business	3sh	
FIN 310	Finance I	3sh	
MGMT 310	Principles of Management	3sh	
MKTG 320	Principles of Marketing	3sh	
Free Electives:			2-4
Total Degree Requirements:			124

Bachelor of Science—Physical Education and Sport–Aquatic Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			54-55
Mathematics: MATH 217			
Health and Wellness: FDNT 143 or MLSC 101-102			
Natural Science: BIOL 103-104 or CHEM 101-102			
Social Science: PSYC 101, SOC 151			
Liberal Studies Electives: BTED/COSC/IFMG 101, FDNT 145, no course with HPED prefix			
Major:			31
Core Requirements:			
HPED 142	Foundations of Health, Physical Education, and Sport	3sh	
HPED 200	Fundamentals of Physical Activity	1sh	
HPED 210	Motor Development	2sh	
HPED 221	Human Structure and Function	3sh	
HPED 251	Foundations of Safety and Emergency Health Care	3sh	
HPED 263	Aquatics	1sh	
HPED 315	Biomechanics	3sh	
HPED 341	Evaluation in Health and Physical Ed	3sh	
HPED 343	Physiology of Exercise	3sh	
HPED 344	Adapted Physical Education	3sh	
HPED 441	Psychosocial Implications for Health and Physical Education	3sh	
HPED 442	Seminar in Health, Physical Education, and Recreation I	3sh	
Sport Science Requirements:			15-17
HPED 175	Prevention and Care of Injuries to the Physically Active	2sh	
HPED 319	Preprofessional Experience II	1-3sh	
HPED 375	Physiological Basis of Strength Training	3sh	
HPED 410	Exercise Prescription	3sh	
HPED 411	Physical Fitness Appraisal	3sh	
HPED 412	Physical Activity and Stress Mgmt	3sh	
Aquatic Track:			12
HPED 165	Lifeguarding	1sh	
HPED 261	Water Safety Instructor	1sh	
HPED 264	Advanced Aquatics	1sh	
HPED 270	Instructor of Handicapped Swimming	1sh	
HPED 276	Coaching of Swimming	1sh	
HPED 279	Swimming Pool Maintenance and Chemistry	2sh	
HPED 280	Aquatic Facilities Management	2sh	
HPED 335	Coaching and Managing of Athletic Programs	3sh	
Free Electives:			9-12
Total Degree Requirements:			124

Bachelor of Science—Physical Education and Sport–Athletic Training Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			54-55
Mathematics: MATH 217			
Health and Wellness: FDNT 143 or MLSC 101-102			
Natural Science: BIOL 103-104 or CHEM 101-102			
Social Science: PSYC 101, SOC 151			
Liberal Studies Electives: BTED/COSC/IFMG 101, FDNT 145, no course with HPED prefix			
Major:			31
Core Requirements:			
HPED 142	Foundations of Health, Physical Education, and Sport	3sh	
HPED 200	Fundamentals of Physical Activity	1sh	
HPED 210	Motor Development	2sh	
HPED 221	Human Structure and Function	3sh	
HPED 251	Foundations of Safety and Emergency Health Care	3sh	
HPED 263	Aquatics	1sh	
HPED 315	Biomechanics	3sh	
HPED 341	Evaluation in Health and Physical Ed	3sh	
HPED 343	Physiology of Exercise	3sh	
HPED 344	Adapted Physical Education	3sh	
HPED 441	Psychosocial Implications for Health and Physical Education	3sh	
HPED 442	Seminar in Health, Physical Education, and Recreation I	3sh	

Sport Science Requirements			**12**
HPED 175	Prevention and Care of Injuries to the Physically Active	2sh	
HPED 345	Athletic Training	3sh	
HPED 346	Athletic Training Lab	1sh	
HPED 375	Physiological Basis of Strength Training	3sh	
HPED 411	Physical Fitness Appraisal	3sh	
Athletic Training Track Requirements			**24**
BIOL 151	Human Physiology	4sh	
HPED 365	Advanced Athletic Training	4sh	
HPED 376	Athletic Training Clinical Practicum I	1sh	
HPED 377	Athletic Training Clinical Practicum II	1sh	
HPED 446	Therapeutic Modalities	4sh	
HPED 448	Therapeutic Exercise for Athletic Injury Management	4sh	
HPED 476	Athletic Training Clinical Practicum III	1sh	
HPED 477	Athletic Training Clinical Practicum IV	1sh	
PHYS 151	Medical Physics Lecture	3sh	
PHYS 161	Medical Physics Lab	1sh	
Free Electives:			**2-3**
Total Degree Requirements:			**124**

Note: The office of the Athletic Training Curriculum Coordinator can provide additional information related to specific requirements regarding initial health screening, criminal record checks, and liability insurance needs.

Bachelor of Science in Education—Health and Physical Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54**
Mathematics: MATH 217
Health and Wellness: FDNT 143 or MLSC 101-102
Natural Science: BIOL 103-104 or CHEM 101-102
Social Science: PSYC 101, SOC 151
Liberal Studies Electives: FDNT 145, PSYC 378, or approved alternatives

Major:

Course Requirements:			**31**
HPED 142	Foundations of Health, Physical Education, and Sport	3sh	
HPED 200	Fundamentals of Physical Activity	1sh	
HPED 210	Motor Development	2sh	
HPED 221	Human Structure and Function	3sh	
HPED 251	Foundations of Safety and Emergency Health Care	3sh	
HPED 263	Aquatics	1sh	
HPED 315	Biomechanics	3sh	
HPED 341	Evaluation in Health and Physical Education	3sh	
HPED 343	Physiology of Exercise	3sh	
HPED 344	Adapted Physical Education	3sh	
HPED 441	Psychosocial Implications for Health and Physical Education	3sh	
HPED 442	Seminar in Health, Physical Education, and Recreation I	3sh	
Professional Requirements			
Health and Physical Education:			**22**
HPED 211	Dance, Rhythmic Activities, and Gymnastics	3sh	
HPED 212	Team Sports	3sh	
HPED 213	Individual and Dual Sports and Adventure Activities	3sh	
HPED 318	Preprofessional Exp I	1sh	
HPED 321	Methods in Elementary Health and Physical Education	3sh	
HPED 325	School and Community Health	3sh	
HPED 426	Health Science Instruction	3sh	
HPED 450	Curriculum and Programming in Sexuality Education	3sh	
Professional Education Requirements: (1)			**24**
COMM 103	Digital Instructional Technology	3sh	
EDSP 102	Educational Psychology	3sh	
EDUC 242	Pre-student Teaching Clinical Exp I	1sh	
EDUC 342	Pre-student Teaching Clinical Exp II	1sh	
EDUC 421	Student Teaching	6sh	
EDUC 441	Student Teaching	6sh	
EDUC 442	School Law	1sh	
FDED 102	American Ed in Theory and Practice	3sh	
Other Requirements:			**0**
Free Electives:			**0**
(#)Total Degree Requirements:			**131**

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EDEX 301 (2sh).
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Certification—Driver Education 12

Certification in Driver Education may be added to a valid Pennsylvania Instructional Certificate with the completion of the following courses:

HPED 251	Foundations of Safety and Emergency Health Care	3sh
HPED 252	Introduction to the Driving Task	3sh
HPED 353	Driving Education Program Management	3sh
HPED 354	Application of Driver Education Instructional Modes	3sh

Highway Safety Center

IUP's Highway Safety Center attempts to address the highway safety needs of the commonwealth through a variety of programs and activities. The Highway Safety Center programs encompass activity in five major areas: 1) research, surveys, and studies, 2) education (teaching), 3) training and conferences, 4) field and extension services, and 5) traffic safety communications and information exchange.

Teacher Certification in Driver Education

Through cooperative effort with IUP's Department of Health and Physical Education, the Highway Safety Center coordinates and directs IUP's Teacher Certification Program in Driver Education.

IUP Regional Highway Safety Project

The IUP Regional Highway Safety Project is a federally funded program contracted with the Pennsylvania Department of Transportation's Center for Highway Safety. Originating at IUP in January, 1987, under the title of the Indiana County Seat Belt Program, its purpose was to increase public awareness and the usage of occupant restraints. The program expanded its emphasis and territory in 1989 and now includes the counties of Armstrong, Jefferson, and Clearfield. Programs for corporations, schools, civic groups, law enforcement agencies, etc., include topics such as occupant safety, bicycle safety, pedestrian safety, safe driving characteristics, and DUI. The project also serves as a resource to other community safety groups by providing printed materials, audiovisual aids, crash-car dummy costumes, and the "Seat Belt Convincer." A Car Seat Loaner Program also provides car seats to residents in Indiana County.

Driver Training Programs

From basic driver education programs for beginning drivers to truck driver training to advanced driver training programs in emergency driving techniques, the Highway Safety Center provides a cadre of courses, all designed to meet the needs of the student.

Emergency Services Training

This is a program area designed to meet the training needs of ambulance, fire, and police personnel in the areas of emergency medical services and rescue.

Traffic Accident Investigation

Traffic Accident Investigation programs are available for safety directors, insurance adjusters, and police personnel. Courses range from basic investigation up to and including accident reconstruction.

Department of Hotel, Restaurant, and Institutional Management

Stephen B. Shiring, Chairperson; Baker, Marshall, Miller, T. Van Dyke; and professors emeriti Simkins, Woods

Website: *http://www.iup.edu/hrim*

The department offers students an academic preparation leading to a Bachelor of Science degree in Hotel, Restaurant, and Institutional Management. Students take general courses in business, chemistry, biology, computer literacy, and foreign language. Students elect to concentrate in either food service management or lodging management. The program has received accreditation from the Accreditation Commission for Programs in Hospitality Administration.

The food service management track prepares students for management positions in restaurants, corporate food services, entertainment or recreation food service, health care, or other institutional and contract food service.

The lodging management track prepares students for management positions within hotels, resorts, and other lodging operations. Emphasis is on the study of housekeeping, rooms, and sales departments but also includes food production and service.

Both programs require the student to complete 880 hours of hospitality industry work experience before graduation. The first 440 hours are completed during the freshman and sophomore years in any type of hospitality position selected by the student and must be completed before the internship is scheduled. The second 440 hours are completed as an internship. The internship is supervised by a faculty member who assists the student in developing the learning package to be achieved during the internship and who advises the intern on university, department, and site requirements.

Professional-type uniforms are prescribed as part of the dress code for departmental majors in all food production courses.

Bachelor of Science—Hotel, Restaurant, and Institutional Management

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			**54-55**
Mathematics: MATH 217			
Natural Science: CHEM 101-102			
Social Science: ECON 121, PSYC 101			
Liberal Studies Electives: BTED/COSC/IFMG 101, FDNT 145, no course with HRIM prefix			
Major:			
Required Courses:			33
FDNT 150	Foods	3sh	
FDNT 151	Foods Laboratory	1sh	
HRIM 101	Introduction to the Hospitality Industry	3sh	
HRIM 259	Hospitality Purchasing	3sh	
HRIM 313	Food Systems I	4sh	
HRIM 356	Hum Resources in Hospitality Industry	3sh	
HRIM 401	Cost Management	3sh	
HRIM 411	Seminar in Hospitality Management	3sh	
HRIM 413	Advanced Restaurant Operations	4sh	
HRIM 493	Internship in Hospitality Management	6sh (1)	
Controlled Electives: One track required			**12-15**
Food Service Management Track: FDNT 145 (2), HRIM 358, 402, 406, 408			
Lodging Management Track: HRIM 115, 260, 365, 420, IFMG 300			
Other Requirements:			**15-21**
ACCT 201	Accounting Principles I	3sh	
BIOL 232	Fundamentals of Microbiology	3sh	
BLAW 235	Legal Environment of Business	3sh	
FNLG ---	Foreign Languages	3-9sh (3)	
MKTG 320	Principles of Marketing	3sh	
Free Electives:			**0-11**
Total Degree Requirements:			**124**

(1) Each student must complete 880 hours of work experience, of which 440 hours must be through supervised experiences in HRIM 493. See department internship coordinator for detailed information.
(2) Semester hours counted in Liberal Studies Electives.
(3) Each student must have foreign language proficiency of either:
   a. Intermediate-level - SPAN 201/FRNC 202/GRMN 252 or
   b. Successful completion of two semesters of one language. Intermediate-level courses may be used as Liberal Studies elective

Department of Human Development and Environmental Studies

Linda S. Nelson, Chairperson; Bowers, Gordon, Heckroth, Hvizdos, Kesner, McCombie, Lynn, A. Nelson, Swinker, Viggiano; and professors emeritae Cramer, Gallati, Hovis, Kazmer, Streifthau, Wood

Website: *http://www.iup.edu/hdes*

The Department of Human Development and Environmental Studies was created by the merging of the Family and Consumer Sciences Education and Consumer Services departments. The mission statement of the Department of Human Development and Environmental Studies is to empower individuals to support human and environmental needs, enabling them to perform professionally in a changing, diverse technological and global society.

The department is composed of majors that are interdisciplinary and share humanistic values. All majors have an applied research focus and stress critical thinking, professional judgment, decision making, and synthesis of information with direct focus upon career paths.

The Human Development and Environmental Studies Department offers academic programs leading to the Bachelor of Science degree in the following majors: Child Development/Family Relations, Consumer Affairs, Fashion Merchandising, and Interior Design. The Family and Consumer Sciences Education program leads to a Bachelor of Science in Education. These majors prepare men and women for positions in business, the community, and education. The majors also prepare students for graduate study in the areas of interior design, housing, clothing, textiles, consumer economics, human service, child development, family studies, or education.

Faculty advisors work closely with students in planning and integrating the academic program to meet the students' career goals and to supplement classroom experiences. Internships are available and encouraged so students can apply academic knowledge to actual situations. International study is also available to provide an enriching cultural experience.

Consumer Affairs

The Consumer Affairs major prepares individuals for professional positions in government, business, and the community. This option concentrates on consumer economic behavior and consumer protection and their relationship to the fair exchange and consumption of products and services. The increased interest in consumer concerns has resulted in creating and expanding positions for persons with an understanding of consumer needs, business operations, and regulatory agencies. The interdisciplinary approach provides the necessary knowledge and skills to fulfill the requirements of such positions.

Community Services Track

Within the Consumer Affairs major, students can elect a community services track which offers a broad selection of courses. Electives may be concentrated in specific areas. A concentration of courses is elected in an outside field of study such as sociology or psychology. Graduates may be employed by the Extension Services or by governmental and social agencies.

Bachelor of Science—Consumer Affairs

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54-55**
Mathematics: MATH 101 or higher
Natural Science: CHEM 101-102
Social Science: ECON 101, PSYC 101, SOC 151
Liberal Studies Electives: no courses with CNSV prefix

Major: **42**
Required Courses:

CNSV 101	Personal and Family Management	3sh
CNSV 121	Introduction to Consumer Services	1sh
CNSV 315	Consumer Economics and Family Finance	3sh
CNSV 413	Problems in Consumer Economics	3sh
CNSV 416	Problems in Family Finance	3sh
CNSV 421	Senior Seminar	2sh
FSMR 110	Introduction to Fashion	3sh
FSMR 303	Visual Merchandising	3sh
FSMR 314	Textiles	3sh
FDNT 212	Nutrition	3sh
INDS 213	Residential Appliances and Consumer Electronics	3sh
INDS 312	Housing and Culture	3sh
JRNL 120	Journalistic Writing	3sh

Controlled Electives:
Two 3sh courses from list:
CNSV 433, 461, 482, FDNT 362, FSMR 112, 212, 303, 350, 450, HRIM 259, 313, 358, INDS 105 — 6sh (1)

Other Requirements: **18**
Outside Concentration:
Required:

BLAW 235	Legal Environment of Business	3sh
BLAW 336	Law of Business Organizations	3sh
BLAW 337	Consumer Law	3sh

Controlled Electives: Three courses from list:
BTST 321, MGMT 300, MKTG 320, 321, 433 — 9sh (1)

Free Electives: **9-10**

Total Degree Requirements: **124**

(1) Substitutions may be approved by department.

Bachelor of Science—Consumer Services/Community Services Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54-55**
Mathematics: MATH 101 or higher
Natural Science: CHEM 101-102
Social Science: ECON 101, PSYC 101, SOC 151
Liberal Studies Electives: no course with CNSV prefix

Major: **32**
Required Courses:

ART 120	Principles of Design	2sh
CNSV 101	Personal and Family Management	3sh
CNSV 121	Introduction to Consumer Services	1sh
CNSV 315	Consumer Economics and Family Finance	3sh
CNSV 421	Senior Seminar	2sh
FDNT 212	Nutrition	3sh
FSMR 110	Introduction to Fashion	3sh
FSMR 314	Textiles	3sh
HMEC 224	Marriage and Family Relations	3sh
INDS 213	Residential Appliances and Consumer Electronics	3sh
INDS 312	Housing and Culture	3sh

Controlled Electives:
One course from list: FSMR 112 or 212 — 3sh

Other Requirements: **25**
Human Ecology Requirements:

FDNT 150	Foods	3sh
FDNT 151	Foods Laboratory	1sh
HMEC 218	Child Development	3sh

Outside concentration: 18sh
Six courses from list: ANTH 211, 319, PSYC 290, PSYC 310, 311, 312, 320, 321, 325, 330, 361, 373, 374, SOC 231, 332, 333, 336, 339, 357, 435, SOWK 238

Free Electives: **12-13**

Total Degree Requirements: **124**

Fashion Merchandising

The Fashion Merchandising program provides course emphasis in clothing and human behavior, apparel production and analysis, textiles and quality control, apparel distribution, merchandising and promotion, global diversity, historic textiles and apparel, color and aesthetics, and apparel construction. Communications, problem solving, group project organization, professional presentation, and analytical and critical thinking skills are incorporated in course content. The Eberly College of Business and Information Technology complements the Fashion Merchandising major by providing study in one of three options: Business Administration, Marketing, and Small Business Management.

A cooperative program between IUP and the Fashion Institute of Technology in New York City allows students to study one of seven majors: accessories design, advertising and communications, advertising design, fashion design, manufacturing management, textile/surface design, and textile development and marketing.

Graduates of the Fashion Merchandising program are being prepared for entry-level positions such as manufacturer's sales representative, production assistant, ready-to-wear quality control analyst, textile testing laboratory technician, management trainee leading to position of store manager, executive/merchandising trainee leading toward position of buyer/merchandise manager, museum curator assistant, personal color consultant, and personalized shopping specialist for an upscale retail firm.

Bachelor of Science—Fashion Merchandising

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54-56**
Mathematics: MATH 101 or higher level MATH course
Natural Science: CHEM 101-102
Social Science: ECON 121; GEOG 104 or PSYC 101; ANTH 110 or ANTH 211 or SOC 151
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122; MATH 214 or 217; no course with FSMR prefix

Major: **39**
Required Courses:

FSMR 110	Introduction to Fashion	3sh
FSMR 112	Fundamentals of Clothing Construction	3sh
FSMR 314	Textiles	3sh
FSMR 350	Apparel Industry I	3sh
FSMR 385	Ready-to-Wear Analysis	3sh
FSMR 434	Quality Control in Textiles /W/	3sh
FSMR 450	Apparel Industry II	3sh
FSMR 456	Historic Costume	3sh
FSMR 480	Seminar in Fashion Merchandising	3sh

Controlled Electives:
Four courses from list: FSMR 212, 252, 281, 303, 357, FSMR 433, 453, 454, 455, 457, 481, 482, INDS 205 — 12sh

Additional Requirements:			21-24
Required Courses:			
ACCT 201	Accounting Principles I	3sh	
MKTG 320	Principles of Marketing	3sh	
JRNL 120 *or* ENGL 310	Journalistic Writing *or* Public Speaking	3sh	
Students will complete courses in one of the following options:		12-15sh	
Option 1: Business Administration Minor (15sh)			
ACCT 202, FIN 310, MGMT 310, select two from BTST 321, BLAW 235, HEMG 300			
(Note: students must meet all minor requirements listed in catalog)			
Option 2: Marketing (12sh)			
MKTG 321, MKTG 420, select two from DEDU 332 (1), DEDU 333, MKTG 421 (1), MKTG 430, MKTG 433			
Option 3: Small Business Management (12sh)			
MGMT 275, 325 (1), select two from MGMT 300, 310, 350, 403 (2)			
Free Electives:			5-10
Total Degree Requirements:			124

(1) Prerequisites to be waived.
(2) Student will need to take ACCT 202 and 300.

Interior Design

The Interior Design program enables graduates to analyze problems, synthesize information, and implement design solutions supportive of the needs of people and the environment. The program emphasizes synthesizing of information and creative problem solving based on interdisciplinary experiences and communicating solutions. The program enables graduates to adapt to a changing world by drawing on history and multidisciplinary experience and applying principles of research.

The core of the Interior Design program includes courses addressing space planning, drafting, design graphics, color theory, building systems, materials and finishes, human factors, computer-aided drafting and design (CADD), design development, textiles, lighting, residential and contract design, and professional practice. Detailed information is available from instructors regarding equipment and supplies to be purchased by students for individual courses in this program. Internships present an excellent opportunity for students to gain practical, on-the-job training and are highly recommended. Experiential learning opportunities in the community augment the program. Students tour a variety of settings including offices, museums, factories, showrooms, retail outlets, and construction sites. Supportive courses are offered in art and business. Graduates are prepared for entry-level positions in commercial and residential design, sales, historic preservation, and showroom management.

Bachelor of Science—Interior Design

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			54-55
Mathematics: MATH 101 or higher level			
Humanities-Philosophy/Religious Studies: PHIL 223 recommended			
Fine Arts: ARHI 101			
Natural Science: SCI 105-106			
Social Science: PSYC 101, SOC 151			
Liberal Studies Electives: ARHI 205 or 206, BTED/COSC/IFMG 101, ECON 122, no courses with INDS prefix			
Major:			45
Required Courses:			
FSMR 314	Textiles	3sh	
INDS 105	Introduction to Interior Design	3sh	
INDS 118	Drafting for Construction I	3sh	
INDS 205	Color Theory and Application	3sh	
INDS 218	Drafting for Construction II	3sh	
INDS 305	Interior Lighting	3sh	
INDS 310	Human Factors in Interior Design	3sh	
INDS 313	Materials and Finishes	3sh	
INDS 315	Residential Design I	3sh	
INDS 319	Residential Design II: Kitchen, Bath, Media Room Design	3sh	
INDS 370	Development of Design I (W)	3sh	
INDS 380	Development of Design II (W)	3sh	
INDS 405	Interior Design Professional Practice	3sh	
INDS 464	Contract Design I	3sh	
INDS 465	Contract Design II	3sh	
Other Requirements:			11
Outside Concentration:			
Business: BTST 101, MKTG 320		6sh	
Art: ART 120, 213; one course from list: ART 211, 215, 216, 218, 219		8sh	
Free Electives:			10-11
Total Degree Requirements:			124

Family and Consumer Sciences Education

The Family and Consumer Sciences Education major prepares students for the teaching of family and consumer sciences-related subjects in the public schools. Coursework is required in all areas of family and consumer services, including child development and family relations, consumer economics, clothing, foods, and interior design/housing. Professional education courses are also required.

Bachelor of Science in Education—Family and Consumer Sciences Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			54-56
Natural Science: CHEM 101-102			
Social Science: PSYC 101, SOC 151			
Liberal Studies Electives: CNSV 315, no courses with FCSE prefix			
College:			35
Professional Education Sequence:			
COMM 103	Digital Instructional Technology	3sh	
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Programs	2sh	
EDSP 102	Educational Psychology	3sh	
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh	
EDUC 242	Pre-student Teaching Clinical Exp I	1sh	
EDUC 342	Pre-student Teaching Clinical Exp II	1sh	
EDUC 431	Student Teaching in Family and Consumer Sciences	6sh	
EDUC 441	Student Teaching	6sh	
EDUC 442	School Law	1sh	
FCSE 350	Teaching Family Life Education	3sh	
FCSE 450	Teaching Vocational Home Economics	3sh	
FDED 102	American Ed in Theory and Practice	3sh	
Major:			35
Required Courses:			
CNSV 101	Personal and Family Management	3sh	
FDNT 150	Foods	3sh	
FDNT 151	Foods Laboratory	1sh	
FDNT 212	Nutrition	3sh	
FSMR 112	Fundamentals of Clothing Construction	3sh	
FSMR 314	Textiles	3sh	
HMEC 218	Child Development	3sh	
HMEC 220	Teaching in Child Development Centers	4sh	
HMEC 224	Marriage and Family Relations	3sh	
INDS 312	Housing and Culture	3sh	
Controlled Electives:			
One from list: CNSV 413 or INDS 213		3sh	
One from list: HMEC 424 or 463		3sh	
Free Electives:			0-2
(#) Total Degree Requirements:			124-126

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Child Development/Family Relations Major

The Child Development/Family Relations program leads to a Bachelor of Science degree. Primary objectives of the program are to prepare professionals to administer and/or work in programs that entail aspects of child development and family relationships; teach at the adult level; or administer human services agencies at federal, state, or local level. The program also provides preparation for students who want to pursue graduate study in child development or family studies.

Bachelor of Science—Child Development/Family Relations

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-56
Mathematics: MATH 101 or 110 or 121 or 217
Natural Science: CHEM 101-102
Social Science: ANTH 110, PSYC 101, SOC 151
Liberal Studies Electives: no courses with HMEC prefix

Major: 39-40
Required Courses:

CNSV 315	Consumer Economics and Family Finance	3sh
FDNT 212	Nutrition	3sh
HMEC 218	Child Development	3sh
HMEC 220	Teaching in Child Dev Centers /W/	4sh
HMEC 224	Marriage and Family Relations	3sh
HMEC 317	Infant Development	3sh
HMEC 426	Techniques of Parent Education	3sh
HMEC 463	Family and the Community	3sh

Controlled Electives: (one track)
Track A: Child Development/Family Relations
HMEC 321, 324, 418, 422, 424
Track B: Child Development (by permission only)
HMEC 321, 418, 420, 422
Track C: Family Relations (by permission only)
HMEC 324 /W/, 424, 493

Other Requirements: 10
Outside Courses:

BIOL 155	Human Physiology and Anatomy	4sh
COMM 103	Digital Instructional Technology	3sh
EDSP 102	Educational Psychology	3sh

Free Electives: 18-23

Total Degree Requirements: 124

Minor—Child Development/Family Relations 18

Required Courses:

HMEC 218	Child Development	3sh
HMEC 224	Marriage and Family Relations	3sh
	Any combination of four additional courses with HMEC prefix	12sh

Department of Industrial and Labor Relations

James F. Byers, Chairperson; Bullard, Gaylor, McPherson, McCollester, Sedwick; and professors emeriti Gates, Morand

Website: *http://www.iup.edu/ilr*

The Department of Industrial and Labor Relations offers a graduate program within the College of Health and Human Services leading to the degree of Master of Arts in Industrial and Labor Relations. The 42-semester-hour program consists of a required core of 27 semester hours, including an elective thesis and elective course offerings totaling 15 semester hours. Internships are available and strongly encouraged.

The Industrial and Labor Relations program is multidisciplinary, combining analytical and human relations skills with knowledge drawn from social sciences and business disciplines. The degree is designed to prepare professional industrial and labor relations practitioners in public and private management, unions, neutral agencies, government agencies, and arbitration panels. It has as a special emphasis labor relations in the public sector.

While the department does not offer coursework leading to an undergraduate major or degree, it does offer several undergraduate courses which are open to students of any major or college.

Department of Nursing and Allied Health Professions

Jodell L. Knzneski, Chairperson; Barlow, Beck, Bellak, Doas, Gerwick, Hartman, Holmes, Houser, Labant, Palmer, Polansky, Poorman, Rossiter, Sadler, Settlemyer, Shellenbarger, Snyder, Twal, Walz, Waszak, Zuraikat; and professors emeritae Blair, Kresak, Murray, Smatlak, Thistlethwaite

Website: *http://www.iup.edu/rn-alliedhealth*

The College of Health and Human Services offers a curriculum leading to the Bachelor of Science degree in Nursing. Students are admitted to the nursing major as freshmen. Transfer students and those with a previous degree may also be admitted. Upon completion of the program, the graduate is prepared to write the examination for licensure as a Registered Nurse in Pennsylvania and all other states. The program is accredited by the Commission on Collegiate Nursing Education.

The nursing curriculum has as its primary goal the development of professional nurse generalists who are liberally educated, clinically competent, and aware of their social responsibilities as health professionals. The program is designed to provide a broad background in liberal education, coupled with the specialized knowledge and skills required for professional nursing practice. Additionally, the curriculum prepares the nurse to practice within the professional code of nursing ethics, to function effectively as a member of the health care team, and to utilize scientific principles in planning, implementing, and evaluating health care. The nursing curriculum emphasizes concepts in primary, secondary, and tertiary prevention of health problems.

The first two semesters are devoted mainly to Liberal Studies and science courses considered essential to the nursing major. Throughout the last six semesters clinical experiences in patient care are provided in acute and long-term care facilities as well as community settings.

Registered Nurse students are enrolled in the basic baccalaureate program in nursing. They will have an upper-division major in Nursing and will fulfill all degree requirements set by the university and the Nursing Department. The Registered Nurse student may be awarded advanced standing, based on prior work completed at an accredited college or university and on exemption tests in nursing at a given point in the curriculum.

The Bachelor of Science degree in Nursing is offered for registered nurses who are graduates of accredited diploma or associate degree nursing programs and who have met IUP's admission requirements. The track for registered nurses awards advanced standing based on prior work completed in a nursing program. Registered nurse students will fulfill all degree requirements set by the university. The track is designed to prepare the professional nurse to function as a provider, designer, manager, and coordinator of care in a variety of health care settings.

Detailed information is available in the department office regarding requirements such as health screening, liability insurance, legal clearance, transportation, and professional uniforms.

Bachelor of Science—Nursing (@)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 55-56
Mathematics: MATH 217 (1)
Natural Science: CHEM 101-102
Social Science: PSYC 101, SOC 151
Liberal Studies Electives: PHYS 151-161, PSYC 310, no courses with NURS prefix

Major: 52-55
Required Courses:

NURS 211	Nursing Practice I	1sh
NURS 212	Professional Nursing I	2sh
NURS 213	Nursing Practice II	1sh

NURS 214	Health Assessment	2sh
NURS 236	Foundations of Nursing	3sh
NURS 312	Professional Nursing II	2sh
NURS 316	Research Utilization in Nursing	3sh
NURS 336	Adult Health I	4sh
NURS 337	Adult Health Clinical I	5sh
NURS 338	Maternal-Child Health	4sh
NURS 339	Maternal-Child Health Clinical	5sh
NURS 412	Professional Nursing III	2sh
NURS 432	Psychiatric/Mental Health	2sh
NURS 434	Community Health	2sh
NURS 435	Community/Psychiatric/Mental Health Clinical	5sh
NURS 436	Adult Health II	4sh
NURS 437	Adult Health Clinical II	5sh
NURS 450	A Cognitive Approach to Clinical Problem Solving (2)	3sh

Other Requirements: 16
Science Sequence:

BIOL 105	Cell Biology	3sh
BIOL 150	Human Anatomy	3sh
BIOL 151	Human Physiology	4sh
BIOL 241	General Microbiology	3sh
FDNT 242	Nutrition	3sh

Free Electives: 0-1

(#)Total Degree Requirements: 124-127

(@) Program revision pending Council of Trustees approval.
(1) The Pennsylvania State Board of Nursing requires two units of high school mathematics (one of which is algebra) for admission to the nursing major.
(2) Students who achieve a higher score than a specified minimum on a department-required standard test(s) are exempt from NURS 450.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Bachelor of Science—Nursing/Registered Nurse Track (@)

Liberal Studies: As outlined in Liberal studies section with the following specifications: 51-53
Mathematics: MATH 217
Health and Wellness: Fulfilled by the major

Major: 59
Required Courses:

NURS 316	Research Utilization	3sh
NURS 334	Transitions in Professional Nursing	3sh
NURS 411	Advanced Health Assessment	3sh
NURS 412	Professional Nursing III	2sh
NURS 434	Community Health	2sh
NURS 454	Health Promotion of Families Across the Lifespan	3sh
NURS 455	Introduction to Nursing Informatics	3sh
NURS 467	Leadership Practicum	2sh
NURS 469	Community Practicum	2sh
NURS 480	Seminar in Nursing	3sh
NURS XXX	Electives	3sh
NURS	Credits via articulation	30sh

Free Electives: 12-14

Total Degree Requirements: 124

(@) Program pending Council of Trustees approval.

Allied Health Professions Programs

Rebecca L. Hartman, Coordinator

Respiratory Care

Respiratory therapists assist physicians in the care of patients who have respiratory system problems or illnesses that relate to breathing. Their assistance includes administering gaseous drugs and executing therapeutic procedures. Included are the operation and maintenance of specialized equipment.

The program leads to the Bachelor of Science degree in Respiratory Care. Presented jointly by IUP and the Western Pennsylvania Hospital in Pittsburgh, the program offers intensive theoretical and applied knowledge to produce highly skilled graduates who are prepared to enter the profession as therapists or instructors.

Two academic years of university studies, followed by two academic years of hospital studies and clinical practice, constitute the program. Students must earn a GPA of 2.25 in Natural Sciences and Mathematics courses to be considered for admission into the clinical years in Respiratory Care. However, since admission to the hospital is competitive, IUP cannot guarantee admission into the hospital program.

Bachelor of Science—Respiratory Care

Liberal Studies: As outlined in Liberal studies section with the following specifications: 45-47
Humanities: PHIL 222 recommended
Mathematics: MATH 105 or higher level
Natural Sciences: CHEM 101-102
Social Sciences: PSYC 101, SOC 151, non-Western course
Liberal Studies Electives: one course, BTED/COSC/IFMG 101 recommended
Synthesis: not required
Writing Intensive: not required

Major: 62
Required Courses: (1) (2)

RESP 101	The Profession of Respiratory Care	1sh
RESP 326	Respiratory Care Clinical Practice I	3sh
RESP 327	Pharmacology	3sh
RESP 328	Introduction to Respiratory Care	4sh
RESP 329	Respiratory Care Equipment	4sh
RESP 330	Cardiopulmonary Resuscitation	2sh
RESP 333	Respiratory Care Clinical Practice II	1sh
RESP 334	Respiratory Care Instrumentation and Application	4sh
RESP 335	Patient Care Skills	3sh
RESP 336	Cardiopulmonary Evaluation and Clinical Correlation	4sh
RESP 337	Intro to Pulmonary Function Studies	1sh
RESP 425	Clinical Case Studies	3sh
RESP 426	Respiratory Care Clinical Practice III	5sh
RESP 428	Essentials of Electrocardiology	2sh
RESP 429	Design and Function of a Respiratory Care Program	2sh
RESP 430	Pulmonary Function Studies	3sh
RESP 431	Pediatric Respiratory Care	1sh
RESP 433	Respiratory Care Clinical Practice IV	5sh
RESP 434	Neonatal Respiratory Care	3sh
RESP 436	Respiratory Care Teaching	2sh
RESP 437	Methods in Critical Care	2sh
RESP 438	Cardiopulmonary Rehabilitation	1sh

Other Requirements: 17
Science Courses:

BIOL 105	Cell Biology	3sh
BIOL 150	Human Anatomy	3sh
BIOL 151	Human Physiology	4sh
BIOL 241	General Microbiology	3sh
PHYS 151	Medical Physics Lecture	3sh
PHYS 161	Medical Physics Lab	1sh

Free Electives: 0

(#)Total Degree Requirements: 124-126

(1) Qualified students are encouraged to elect RESP 342, in which case total credits would be 126-130.
(2) RESP 300- and 400-level courses are completed at Western Pennsylvania Hospital in Pittsburgh. The courses are consistent with the requirements of, and the program is accredited by, the Joint Review Committee for Respiratory Therapy Education.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Medical Technology

Medical Technology encompasses the study of analytical and diagnostic procedures used in clinical laboratories and in medical research. Medical technologists/clinical laboratory scientists perform a variety of laboratory tests upon which the physician depends for accurate diagnosis, prognosis, and proper treatment of the patient. The program of studies, presented jointly by IUP and accredited medical technology programs in hospitals, prepares the student to enter the profession. Upon completion of the four-year program, the degree of Bachelor of Science in Medical Technology is granted. The program also prepares the student for graduate and professional schools.

IUP maintains short- and long-term affiliations with selected hospital schools. The Allied Health Professions coordinator provides student counseling and maintains a liaison with hospital schools. However, since admission to any hospital program is on a competitive basis, IUP cannot guarantee admission into any hospital program.

The following programs maintain permanent agreements of affiliations with IUP: Abington Memorial Hospital, Abington; Altoona Hospital, Altoona; Elkins Park Hospital, Elkins Park; Lancaster General Hospital, Lancaster; Reading Hospital and Medical Center, Reading; St. Vincent Health Center, Erie; and University of Hartford, West Hartford, Connecticut. Other temporary affiliations are negotiated for the convenience of the student.

Completion of academic studies at IUP and of one year of clinical experience qualifies the student to take a national certification examination. Successful results on this examination lead to certification as a professionally qualified medical technologist/clinical laboratory scientist.

Bachelor of Science—Medical Technology

Liberal Studies: As follows: **45-47**
Composition: ENGL 101, 202
Humanities: three courses – one in each area (PHIL 222 recommended)
Fine Arts: one course
Mathematics: MATH 110 or higher level
Natural Science: CHEM 111-112
Social Sciences: three courses
Health and Wellness/ROTC: H&W recommended
Liberal Studies Electives: PHYS 111
Synthesis: not required
Writing Intensive: one required

Major: **32**
Required Courses: (1)

MEDT 494	Clinical Microbiology	8sh
MEDT 495	Clinical Chemistry	10sh
MEDT 496	Clinical Hematology/Coagulation	6sh
MEDT 497	Clinical Immunohematology	4sh
MEDT 498	Clinical Immunology/Serology	2sh
MEDT 499	Clinical Seminar	2sh

Other Requirements: Science sequence **37-39**
Required Courses:

BIOL 111	Principles of Biology I	4sh
BIOL 250	Principles of Microbiology	3sh
BIOL 364	Immunology	3sh
CHEM 231	Organic Chemistry I	4sh
CHEM 232	Organic Chemistry II	4sh
CHEM 323	Analytical Methods	4sh
CHEM 351	Biochemistry	4sh
PHYS 121	Physics I Lab	1sh
PHYS 112/122	Physics II Lecture/Lab	4sh

Controlled Electives:
Two courses from list: BIOL 112, 120, 151, 263, 331, 350, 352, 360, 432, 466, 476 — 6sh

Free Electives: **6-10**

(#)Total Degree Requirements: **124**

(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

(1) These courses are offered by our affiliating hospital-based clinical programs. These areas of study are consistent with requirements of the National Accrediting Agency for Clinical Laboratory Sciences. All six of these areas of study are completed during the final twelve months of the degree program at one of the affiliating hospitals.

Nuclear Medicine Technology

Nuclear Medicine is the medical specialty that utilizes the nuclear properties of radioactive and stable nuclides to make diagnostic evaluations of the anatomic or physiologic conditions of the body and to provide therapy with unsealed radioactive sources. A nuclear medicine technologist's skills complement those of the nuclear medicine physician.

The nuclear medicine technologist is a highly trained individual who has completed an approved course of study in the theory of nuclear medicine technology. This allied health profession utilizes radioactive materials for the diagnosis of various pathological disease states and for the treatment of some specific disorders. The American College of Radiology, American Medical Association, American College of Medical Technology, American Society of Technologists, Society of Nuclear Medicine, and the Society of Medicine-Technologist Section cooperate to establish, maintain, and promote appropriate standards of quality for educational programs in nuclear medicine technology.

The program leading to a Bachelor of Science degree in Nuclear Medicine Technology consists of three years of study at IUP and one year at the University of Findlay/Nuclear Medicine Institute in Findlay, Ohio. Students must achieve a GPA of 2.25 in the Natural Sciences and Mathematics to be considered for admission to the Nuclear Medicine Institute. Since admission to the Nuclear Medicine Institute is competitive, IUP cannot guarantee admission into the institute's program.

Bachelor of Science—Nuclear Medicine Technology

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54-55**
Mathematics: MATH 217
Natural Science: CHEM 101-102
Social Science: PSYC 101, SOC 151
Liberal Studies Electives: BTED/COSC/IFMG 101 plus three Liberal Studies electives or two Liberal Studies elective courses and one Synthesis course

Major: **32**
Required Courses: (1)

NMDT 427	Nuclear Scintigraphy	3sh
NMDT 428	Radiation Physics	3sh
NMDT 429	Nuclear Medicine Instrumentation	3sh
NMDT 430	Radiation Biology and Radiation Protection	2sh
NMDT 431	In Vivo/In Vitro Non-Imaging	1sh
NMDT 432	Radiopharmaceuticals	3sh
NMDT 433	Introduction to Tomographic Imaging	1sh
NMDT 434	Clinical Nuclear Medicine	16sh

Other Requirements: **21**
Science Courses:

BIOL 105	Cell Biology	3sh
BIOL 150	Human Anatomy	3sh
BIOL 151	Human Physiology	4sh
PHYS 111	Physics I Lecture	3sh
PHYS 121	Physics I Lab	1sh
PHYS 112	Physics II Lecture	3sh
PHYS 122	Physics II Lab	1sh

Required courses: (2)

ENGL 310	Public Speaking	3sh

Free Electives: **17**
At least two of the selected courses must be Writing Intensive

Total Degree Requirements: **124-125**

(1) These courses are offered at the University of Findlay/Nuclear Medicine Institute, Findlay, Ohio. These areas of study are consistent with requirements of the Joint Review Committee on Educational Programs on Nuclear Medicine Technology (JRCNMT). All eight of these areas of study are completed during the final twelve months of the degree program.

(2) Students are also required to complete a medical terminology course/program. Options to fulfill this requirement must be approved by the Coordinator of Allied Health Professions.

Gerontology Certificate Program

Rebecca L. Hartman, Coordinator

The Gerontology Certificate program provides an interdisciplinary approach to the systematic study of the aging and is designed to be combined with any undergraduate major at IUP. The 21-semester-hour program entails three core courses, three elective courses, and an internship that will provide experiential learning in an agency or program serving older adults. Many courses fulfill the requirements for the Liberal Studies program. Applications are available at 244 Johnson Hall. For information, call 724-357-7647.

Gerontology Certificate Program — 21

Core Courses:			9
HPED 350	Health Aspects of Aging	3sh	
PSYC 312	Adult Development and Aging	3sh	
SOC 357	Sociology of Aging	3sh	
Controlled Electives:			9
ANTH 340, ANTH 444, CNSV 315, GERN 281, GERN 481, GERN 482, HMEC 324, HPED 413, MGMT 300, MGMT 311, PSYC 376, PSYC 378, PHIL 400, PHIL 405, RHAB 312, SAFE 380, SOC 336, SOC 342, SOC 345		9sh	
Other Requirements:			3
Internship (GERN 493 or internship in student's major)		3sh	

Department of Safety Sciences

Lon H. Ferguson, Chairperson; Engler, Janicak, Joseph, McClosky, Rhodes, Rivers, Soule; and professors emeriti Christensen, McClay, Pacalo

Website: *http://www.iup.edu/safetysciences*

The department offers the Bachelor of Science degree in Safety Sciences with specialization in occupational safety and health. The program in Safety Sciences prepares the student for professional, administrative, managerial, and supervisory positions in industry, manufacturing, insurance, transportation, utility, government, construction, trade service industries, and others. There remains a need in Pennsylvania and the nation for university-educated occupational safety and health professionals. The curriculum includes a major of 41 semester hours in Safety Sciences and an additional 16 semester hours in related professional courses. A variety of elective courses are available in both the major and professional fields that enable students to strengthen their primary interest areas.

Bachelor of Science—Safety Sciences

Liberal Studies: As outlined in Liberal Studies section with the following specifications: — **55-56**
Mathematics: MATH 121
Natural Science: CHEM 101 and 102
Social Science: PSYC 101, SOC 151, non-western culture required
Liberal Studies Electives: BTED/COSC/IFMG 101, ECON 122, and MATH 217, no course with SAFE prefix

Major:			41
Required Courses:			
SAFE 101	Intro to Occupational Safety and Health	3sh	
SAFE 111	Principles of Industrial Safety I	3sh	
SAFE 210	Environmental Safety and Health Regulations	3sh	
SAFE 211	Principles of Industrial Safety II	4sh	
SAFE 301	Health Hazard Identification	3sh	
SAFE 303	Control of Health Hazards	3sh	
SAFE 311	Industrial Fire Protection	3sh	
SAFE 345	Systems Safety Analysis	3sh	
SAFE 347	Ergonomics	3sh	
SAFE 402	Health Hazard Evaluation	3sh	
SAFE 412	Hazard Prevention Management	4sh	
SAFE 488/493	Safety Internship	6sh	
Other Requirements:			28
Additional Science and Mathematics:			
BIOL 155	Human Physiology and Anatomy	4sh	
PHYS 111	Physics I Lecture	3sh	
PHYS 112	Physics II Lecture	3sh	
PHYS 121	Physics I Lab	1sh	
PHYS 122	Physics II Lab	1sh	
Professional Courses:			
BTST 231	Speech Communication for Professionals	1sh	
BTST 321	Business and Interpersonal Comm	3sh	
MGMT 311	Human Behavior in Organizations	3sh	
Three professional courses approved by student's advisor		9sh	
Total Degree Requirements:			124-125

Minor—Safety Sciences — 18

Required Courses:		
SAFE 101	Intro to Occupational Safety and Health	3sh
SAFE 111	Principles of Industrial Safety I	3sh
SAFE 301	Health Hazard Identification	3sh
Controlled Electives:		
Three SAFE courses approved by department chair		9sh

College of Humanities and Social Sciences

Brenda L. Carter, Dean
Alphonse N. Novels, Associate Dean
Yaw A. Asamoah, Dean's Associate
Website: *http://www.iup.edu/humanities*

The College of Humanities and Social Sciences provides a liberal education as an essential foundation for the student's preparation for a satisfying career. The college maintains an emphasis on the fundamental understanding of our cultural heritage, combined with development of a thorough background of knowledge in the student's specific area of interest. It seeks to promote in students critical and objective thinking, analytical skills, and a keen awareness of their responsibilities to society.

College Majors

Anthropology
Criminology
Economics
English
Foreign Languages and International Trade
French
Geography
German
Government and Public Service
History
International Studies
Journalism
Philosophy
Political Science
Regional Planning
Religious Studies
Sociology
Spanish

Degrees

The departments of Anthropology, Criminology, Economics, English, French and German, Geography and Regional Planning, History, Journalism, Philosophy and Religious Studies, Political Science, Spanish and Classical Languages, and Sociology offer work leading to a Bachelor of Arts degree. The Bachelor of Science is offered in Regional Planning. The Bachelor of Science in Education is offered in English, French, German, Social Science, and Spanish.

Master of Arts or Master of Science degrees are offered by Criminology, English, Geography and Regional Planning, History, Political Science, and Sociology. The English and Criminology departments offer the Doctor of Philosophy degree. Information about these graduate programs may be obtained from the Graduate School.

Junior-Year Review

All students who are candidates for a degree offered by the College of Humanities and Social Sciences must meet with their faculty advisors and complete a junior-year review of their academic record upon earning 72 semester hours. The purpose of the review is to verify that, by the planned graduate date, the student's graduation requirements will have been met. Completed junior-year review reports must be approved by the department chairperson and the associate dean. Juniors who are eligible for the review will not be permitted to register without completing this checkout.

It remains the student's responsibility to complete a form to apply for graduation and submit it to the department chairperson early in the term prior to graduation. Failure to meet the graduation application deadline may result in a delay in the student's graduation.

Degree Requirements

In addition to the university's Liberal Studies requirements, all students seeking a baccalaureate degree in the College of Humanities and Social Sciences must complete the requirements for a major as established by the department through which they wish to specialize. Statements of these requirements, and the requirements for those minoring in a specific field, appear in the department sections that follow. A double major or minor may encompass a discipline outside as well as within the college but should be selected only with advisor approval. As a general principle, there is considerable latitude in course choice for Humanities and Social Sciences majors. The intermediate-level foreign language requirement (a description follows) applies without exception to all Humanities and Social Sciences four-year degree programs.

College Foreign Language Requirements

Students in the colleges of Natural Sciences and Mathematics and Humanities and Social Sciences must demonstrate an intermediate level of foreign language proficiency as a college requirement for graduation. They may choose any of the languages offered, including self-instruction in the Critical Languages, described below. Intermediate-level foreign language courses in French, German, Italian, Latin, and Spanish will also count as Liberal Studies electives.

For students with previous foreign language instruction or experience, individual placement into foreign language courses may be done during placement testing and registration prior to the first semester at IUP. Students whose placement test demonstrates competence equivalent to the intermediate level are considered to have fulfilled the foreign language requirement. Students with no previous foreign language background will take entry-level courses, which may be counted as free electives in the total required for graduation.

Any foreign student, registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, is exempt from the foreign language requirement if the department of the student's major does not require a specific foreign language.

Critical Languages Program

The Critical Languages program is a self-instructional/tutorial approach to less commonly taught foreign languages. Students meet with a tutor three hours per week in addition to practicing with audiocassettes. Most tutors are native speakers of the language. Professional teachers of the specific language may be brought in from other universities to evaluate student performance. The final grade is based on final examination as well as on performance during the tutorial sessions. Interested students must contact the coordinator before registration. Each course carries 3 semester hours of credit.

The following languages may be available for study: Arabic, Chinese, Dutch, Finnish, Hindi, Hungarian, Japanese, Korean, Modern Greek, Portuguese, Russian, Swedish, Hebrew, and Swahili.

Foreign Study Programs

College majors may be interested in the various Foreign Study Programs and Tours offered. Semester hours obtained through such arrangements normally are applicable toward a Humanities and Social Sciences degree. Also of interest are the college's credit-awarding programs at Valladolid (Spain), Duisburg (Germany), and Nancy (France), as well as the Summer Study in Mexico Program. For further information, contact the chair of the appropriate language department.

IUP at Valladolid: Through the Spanish and Classical Languages Department, the university has offered a spring semester of study at the University of Valladolid, Spain, for more than thirty-five years. The participants live in private homes. For details and brochures, contact the Spanish and Classical Languages Department.

IUP at Duisburg: IUP has a study abroad program at the University of Duisburg, West Germany. The program is open to German majors and other students having specific interest in a foreign study experience. Students must register for FNLG 100 and pay a foreign exchange fee for each semester in the program. For further information, contact the French and German Department.

IUP at Nancy: IUP has established a study program with the University of Nancy, France. Participants in the Nancy program must pay a foreign exchange fee for each semester in the program. For details, contact the French and German Department.

IUP at Mexico Summer Program: The Spanish and Classical Languages Department sponsors a program of study in Spanish language in Mexico. The program is located at Cuernavaca, and the cost of the program includes transportation, complete room and board, insurance, and tuition. The student may earn up to 6 semester hours of undergraduate or graduate credit. Internship opportunities are available for students with fluency in Spanish. For details and brochures, contact the Spanish and Classical Languages Department.

IUP at Costa Rica Summer Program: The Department of Spanish and Classical Languages has also established a four-week study program at the National University of Costa Rica, located in Heredia. Participants live with Costa Rican families and take classes at the university. This program is intended for students who are going abroad for the first time, and preference is given to beginning students. Participants earn four transfer credits in Spanish from the UNA. For details and brochures, contact the Spanish and Classical Languages Department.

Pre-Law Track

The College of Humanities and Social Sciences offers a pre-law track that prepares the student for application to law school. This track is in the following Social Sciences, Humanities, and Business departments: Business, Criminology, Economics, English, History, Philosophy, and Political Science. All tracks are designed as part of a baccalaureate degree and as preparation for law school.

Coursework in the pre-law track centers upon a carefully developed interdisciplinary minor. For detailed guidance in pre-law, students should consult the pre-law advisor in their major department.

Internship Programs

Humanities and Social Sciences departments have extensive internship programs which allow students to engage in supervised off-campus work experience for credit. IUP students have worked in Harrisburg as aides to state legislators, with the Governor's Justice Commission and the Local Government Commission, and with the Investigations Division, Pennsylvania Department of Justice. Others have worked at correctional institutions in Pittsburgh, Greensburg, and Warrendale, as peer group counselors on the local campus, as assistants to the Pennsylvania state Republican chairperson, as on-site guides at the United Nations, as workers on an Israeli kibbutz, and as student aides for the Department of Education in Puerto Rico. Other students have worked in the Pittsburgh federal probation office. Many students have worked with major political parties and candidates at the local and state levels. At the county level, they have been attached to the offices of the county planner, the Common Pleas Court, the coroner, the treasurer, commissioners, and the borough manager. Students have also worked in the Washington offices of Pennsylvania congressmen and in many federal and international organizations in Washington as well. Opportunities for internships in other countries also exist. For more information about specific internship programs, students should consult with the chair of the department in which the student is majoring.

Asian Studies Minor

The Asian Studies Minor is designed to increase awareness of the world's largest, most populous, and most diverse continent. Its purpose is to combine an area focus with liberal studies requirements of the IUP curriculum. The minor provides an opportunity to increase awareness and understanding of Asian cultures, environments, and peoples. It adds depth to the liberal studies portion of the students' program, enhances job skills, and prepares students for postgraduate programs with area or regional themes.

Students complete a minimum of 18 semester hours outside of their major. At least four courses (12sh), including three different departmental prefixes, must come from Category A: Exclusively Asia-Focused. One Asian "Critical Language" course may apply to the Category A requirement. Other courses may come from either Category A or Category B: Substantially Asia-Focused. Special topics and independent study courses may be applied to either category with the approval of the Asian Studies Committee.

Category A: Exclusively Asia-Focused Courses are devoted to a combination or subset of the following topics: the continent of Asia (as defined by International Geographical Union convention), its physical

environments, and the human systems and cultures indigenous to the region.

Category B: Substantially Asia-Focused Courses have significant material specifically about the continent of Asia, its physical environments, and the human systems and cultures indigenous to the region. The remainder of the course material establishes relevant comparisons and contexts for Asian themes.

Category A: Exclusively Asia-Focused:			**12-20**
ANTH/SOC 273	Cultural Area Studies: Southeast Asia	3sh	
GEOG 256	Geography of East Asia	3sh	
GEOG 257	Geography of South and Southeast Asia	3sh	
HIST 330	History of the Islamic Civilization	3sh	
HIST 331	Modern Middle East	3sh	
HIST 335	History of East Asia	3sh	
PLSC 383	Political Systems: Asia	3sh	
PLSC 384	Political Systems: Middle East	3sh	
RLST 311	Eastern Philosophy	3sh	
RLST 370	Religions of China and Japan	3sh	
RLST 375	Religions of India	3sh	
SOC 272	Cultural Area Studies: China	3sh	
Asian Critical Languages		3sh each	
CRLG 101/151/201/251 Arabic I, II, III, IV			
CRLG 102/152/202/252 Chinese I, II, III, IV			
CRLG 105/155/205/255 Hindi I, III, IV			
CRLG 108/158/208/258 Japanese I, II, III, IV			
CRLG 109/159/209/259 Korean I, II, III, IV			
Category B: Substantially Asia-Focused:			**0-6**
ECON 339	Economic Development I	3sh	
ECON 345-W	International Trade (Asia case study)	3sh	
ECON 346-W	International Payments (Asia case study)	3sh	
ECON 350	Comparative Economic Systems	3sh	
GEOG 104	Geography of the Non-Western World	3sh	
GEOG 254	Geography of Russia and the Soviet Sphere	3sh	
LBST 499	Asian American Culture	3sh	
LBST 499	Cross-Cultural Communication with Asia	3sh	
PLSC 101	World Politics	3sh	
PLSC 285	Comparative Government II: Non-Western Political Systems	3sh	
RLST 110	World Religions	3sh	
RLST 380	Islam	3sh	

For further information on the Asian Studies Minor, contact the College of Humanities and Social Sciences, 201 McElhaney Hall, (724) 357-2280.

Pan-African Studies Minor

The Pan-African Studies minor is a multidisciplinary program that brings together courses focusing on the vitality and accomplishments of pre-colonial African societies, the cultural and racial heritages of people of African descent in relationship to western societies, and aspects of modern-day African cultures. The cluster of courses included in this program represents a broad, diverse look at the diaspora of people of African origin.

The minor helps IUP students to enrich their cross-cultural studies; to heighten their awareness of, and sensitivity to, cultural diversity; and to expand their knowledge of world contributions of persons of African heritage. A Pan-African studies minor is thus valuable in an increasingly diverse society and attractive to employers and graduate schools alike.

Minor—Pan-African Studies 18

Required Courses:			**6**
HIST 365	History of Black America Since Emancipation	3sh	
PNAF 131	Introduction to Pan-African Studies	3sh	
Controlled Electives:			**12 (1)**
Four courses from the following list:			
ANTH/SOC 271	Cultural Area Study: Africa	3sh	
COMM 380	History of African Americans in Film	3sh	
ECON 339	Economic Development I	3sh	
ENGL 348	African-American Literature	3sh	
GEOG 255	Geography of Africa	3sh	
HIST 355	African History I: Antiquity to 1600	3sh	
HIST 356	African History II: 1600 to Present	3sh	
HIST 366	African-American Women	3sh	
PLSC 382	Political Systems: Africa	3sh	
PNAF 281	Special Topics in Pan-African Studies	3sh	
PNAF 481	Special Topics in Pan-African Studies	3sh	
PNAF 482	Independent Study	3sh	
RLST 360	African Religions	3sh	

(1) With the program coordinator's approval, 3sh of an internship may be counted towards the Pan-African studies minor.

For further information on the Pan-African Studies Minor, contact the College of Humanities and Social Sciences, 201 McElhaney Hall, (724) 357-2280.

Department of Anthropology

Phillip D. Neusius, Chairperson; Chaiken, Conelly, Garcia, Kruckman, S. Neusius, Schmidt; and professors emeriti Lanham, Olin-Fahle

Website: *http://www.iup.edu/anthropology*

The Anthropology Department promotes awareness of anthropological knowledge and methods and seeks to further the discipline and its applications to the problems of the contemporary world. Through teaching, research, and involvement in campus and community events and programs, the anthropology faculty members contribute to the liberal education of IUP students. The anthropology major itself equips students with knowledge and skills needed for full participation in the global environment of the twenty-first century.

Anthropology emphasizes the study of human biological and cultural diversity within its four subfields: sociocultural anthropology, biological anthropology, linguistics, and archaeology. All students receive a solid foundation in the discipline of anthropology and tailor their major to specific interests by following one of the three tracks.

The General Anthropology track continues the student's education in all of the subfields of anthropology, preparing the student for a graduate education in anthropology or in one of many related fields. The general track also provides a solid base for interdisciplinary study with a number of other fields including biology, philosophy, political science, psychology, religious studies, sociology, and Spanish.

The Archaeology track provides an emphasis on the study of culture through the material remains of human behavior. This track provides training for careers in the growing fields of cultural resource management and historic preservation, with opportunities for employment in both government and the private sector. A wide variety of internship opportunities provide hands-on training in these areas.

The Applied Anthropology track provides students with a background in anthropological method and theory, a cross-cultural perspective, and an avenue to translate this knowledge into action through internships and research. Examples of career opportunities include program design, implementation, and evaluation; policy analysis and administrative and managerial development; assessment of current and future human needs; and creation of strategies for social intervention and advocacy. In consultation with an advisor, each student will develop his or her own curriculum in order to build expertise in a specific topical area.

The department also offers preparation for teaching social studies with a concentration in anthropology. This program leads to a Bachelor of Science in Education degree. With its emphasis on cross-cultural comparisons, the realities of contemporary global cultures, and cultural resource management, anthropology provides a solid foundation for teaching social science at the secondary level. The department also offers a minor in anthropology.

Bachelor of Arts—General Anthropology Track

Liberal Studies: As outlined in Liberal Studies section **53-54**
with the following specifications:
Mathematics: MATH 217
Social Science: SOC 151 (recommended)
Liberal Studies Electives: BTED/COSC/IFMG101 (recommended), no courses with ANTH prefix

College: **0-6**
Foreign Language Intermediate Level (1)

Major:			33
Required Courses:			
ANTH 211	Cultural Anthropology	3sh	
ANTH 222	Biological Anthropology	3sh	
ANTH 233	Language and Culture	3sh	
ANTH 244	Basic Archaeology	3sh	
ANTH 456	Field Research Methods	3sh	
Controlled Electives:			
One theory course: ANTH 480 or SOC 447 (2)		3sh	
Three courses in Topical Area Ethnography such as: ANTH 271, 272, 273, 274, 314		9sh	
Two additional ANTH electives (300 or 400 level)		6sh	
Other Requirements:			0
Free Electives:			37-38
Total Degree Requirements:			124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) SOC 447 may be taken only with approval of the advisor.

Bachelor of Arts—Anthropology/Archaeology Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Mathematics:** MATH 217 **Natural Science:** GEOS 121-122-131-132 (recommended) **Social Science:** SOC 151 (recommended) **Liberal Studies Electives:** BTED/COSC/IFMG101 (recommended), no courses with ANTH prefix			53-54
College:			0-6
Foreign Language Intermediate Level (1)			
Major:			36
Required Courses:			
ANTH 211	Cultural Anthropology	3sh	
ANTH 222	Biological Anthropology	3sh	
ANTH 233	Language and Culture	3sh	
ANTH 244	Basic Archaeology	3sh	
Controlled Electives:			
Three methods courses:			
ANTH 317	Archaeological Research Design and Analysis	3sh	
ANTH 320	Archaeological Field School	6sh (2)	
ANTH 415	Cultural Resource Management	3sh	
One theory course: ANTH 480 or SOC 447 (3)		3sh	
Two area courses, one in archaeology and one in ethnography, such as: ANTH 213 or 315 and ANTH 314 or ANTH 271/272/273/274		6sh	
One topical course such as: ANTH 401 or 420		3sh	
Other Requirements:			0
Free Electives: (4)			37-38
Total Degree Requirements:			124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) For approval by advisor, an equivalent field school of another university must have a lab component.
(3) SOC 447 may be taken only with approval of the advisor.
(4) A minor in Geoscience, Geography, History, or other approved field is recommended. An internship (ANTH 493) also is recommended. Your advisor should be consulted

Bachelor of Arts—Anthropology/Applied Anthropology Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Mathematics:** MATH 217 **Social Science:** SOC 151 (recommended) **Liberal Studies Electives:** BTED/COSC/IFMG101, no courses with ANTH prefix			53-54
College:			0-6
Foreign Language Intermediate Level (1)			
Major:			36
Required Courses:			
ANTH 211	Cultural Anthropology	3sh	
ANTH 222	Biological Anthropology	3sh	
ANTH 233	Language and Culture	3sh	
ANTH 244	Basic Archaeology	3sh	
Controlled Electives:			
Two methods courses: ANTH 360, 456		6sh	
One theory course: ANTH 480 or SOC 447 (2)		3sh	
One area course: ANTH 314 or ANTH 271/272/273/274		3sh	
Two additional ANTH electives (300 or 400 level)		6sh	
Internship in Anthropology (3)		6sh	
Other Requirements: (recommended)			0
ENGL 322	Technical Writing		
SOC 231	Contemporary Social Problems		
SOC 457	Computer Use in Sociology		
Free Electives:			34-35
Total Degree Requirements:			124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) SOC 447 may be taken only with permission of the advisor.
(3) Internship is highly recommended but may be replaced by 6sh of pragmatic skill courses upon approval of advisor.

Bachelor of Science in Education—Social Sciences Education/Anthropology Concentration (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Social Science:** ANTH 211, ECON 121, PSYC 101 **Liberal Studies Electives:** ECON 122, GEOG 230, no courses with ANTH prefix			53-55
College:			32
Professional Education Sequence:			
COMM 103	Digital Instructional Technology	3sh	
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2sh	
EDSP 102	Educational Psychology	3sh	
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh	
EDUC 242	Pre-student Teaching Clinical Exp I	1sh	
EDUC 342	Pre-student Teaching Clinical Exp II	1sh	
EDUC 441	Student Teaching	12sh	
EDUC 442	School Law	1sh	
EDUC 455	Teaching of Social Science in Secondary Schools	3sh	
FDED 102	American Ed in Theory and Practice	3sh	
Major:			21
Required Anthropology Courses:			
ANTH 211	Cultural Anthropology	*sh (1)	
ANTH 222	Biological Anthropology	3sh	
ANTH 233	Language and Culture	3sh	
ANTH 244	Basic Archaeology	3sh	
Two area ethnography courses: ANTH 271, 272, 273, or 314		6sh	
Two additional Anthropology courses numbered 300 or above		6sh	
History Distributional Requirements:			9
Any two History courses which focus on the U.S.		6sh	
Any Non-Western or World History course		3sh	
Required Social Science Distribution:			6
GEOG 104, 252, 255, 256, or 257		3sh	
PLSC 280 or 285		3sh	

Other Requirements:	**0**
Free Electives: (2)	**1-6**
Total Degree Requirements:	**124**

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(1) Courses counted toward Liberal Studies credits do not receive duplicate credit in major.
(2) If a course is chosen for a Social Sciences major, it may also fulfill a Liberal Studies elective and permit additional free electives.

Minor—Anthropology 15

Required Course:

ANTH 110	Contemporary Anthropology	3sh

Controlled Electives:

Four additional courses in Anthropology	12sh

Department of Criminology

Dennis M. Giever, Chairperson; Agozino, Austin, Claus, Gibbs, Gido, Hanrahan, Lee, J. Martin, R. Martin, McCauley, McNabb, Merlo, Mutchnick, Myers, Roberts, Scott, J. Thomas, Wilson, Zimmerman; and professor emerita Moyer

Website: *http://www.iup.edu/criminology*

The Department of Criminology offers students seeking careers in criminology a broad liberal arts education supported by a professional education program. The degree offered is the Bachelor of Arts with a major in Criminology; students may also minor in Criminology. Through the Graduate School the department offers graduate work at the master's and doctoral level.

The program in Criminology has a fivefold objective:
1. The education of students for employment and leadership in the expanding field of criminology and criminal justice
2. The education of presently employed criminal justice personnel who recognize a need for furthering their education
3. The instruction of students who wish to acquire an understanding of the processes of criminal justice as a cultural part of their higher education
4. The instruction of students who wish to prepare for graduate study and/or research in criminology
5. A curriculum that provides an excellent foundation for students preparing for a career in law

Nearly every level of government offers opportunities for professional careers in criminology. Employment opportunities normally exist in more than fifty federal agencies, including the Federal Bureau of Investigation, U.S. Secret Service; U.S. Postal Inspectors; Drug Enforcement Agency; Bureau of Alcohol, Tobacco, and Firearms; National Security Agency; U.S. Marshals; the Internal Revenue Service; and military investigative branches. Graduates will find employment in local and state law enforcement, probation, parole, and the custody and treatment of adult and youthful offenders. There are also a wide variety of opportunities in the expanding fields of private, commercial, and industrial security. In addition, many governmental agencies have specialized units dealing with juveniles, community relations, training, education, and research.

Career opportunities are available also in research and teaching at the college and university levels and in research divisions of various agencies.

Students who wish to change their major or minor to Criminology or Criminology/Pre-Law track must have an overall GPA of 2.5 to declare the major or minor and to be accepted formally by the department.

Bachelor of Arts—Criminology

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Liberal Studies Electives:** no courses with CRIM prefix	**53-55**
College: Foreign Language Intermediate Level (1)	**0-6**
Major:	**36**

Required Courses:

CRIM 102	Survey of Criminology	3sh
CRIM 210	Criminal Law	3sh
CRIM 300	Theory of Complex Criminal Justice Organizations	3sh
CRIM 306	Criminological Research Methods	3sh
CRIM 400	Theoretical Criminology	3sh
CRIM 401	Contemporary Issues in Criminology	3sh

Controlled Electives:

One course from list: CRIM 416, 451, 470, 491	3sh
Five additional Criminology courses	15sh (2)

Free Electives: (3)	**27-35**
Total Degree Requirements:	**124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) No more than 6sh of CRIM 493 may be applied to 36sh minimum in major.
(3) Students selecting a minor may apply no more than 15sh outside the College of Humanities and Social Sciences without special approval.

Bachelor of Arts—Criminology/Pre-Law Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Liberal Studies Electives:** no courses with CRIM prefix	**53-55**
College: Foreign Language Intermediate Level (1)	**0-6**
Major:	**36**

Required Courses:

CRIM 102	Survey of Criminology	3sh
CRIM 210	Criminal Law	3sh
CRIM 300	Theory of Complex Criminal Justice Organizations	3sh
CRIM 306	Criminological Research Methods	3sh
CRIM 400	Theoretical Criminology	3sh
CRIM 401	Contemporary Issues in Criminology	3sh

Controlled Electives:

One course from list: CRIM 416, 451, 470, 491	3sh
Five additional Criminology courses	15sh (2)

Other Requirements: Pre-law interdisciplinary track	**15-21**

Seven courses, including at least one from each of six areas:
Business: ACCT 201, ACCT 202, BLAW 235
Economics: ECON 121, 122, 332
English: ENGL 212, 220, 310
History: HIST 320, 321, 346
Philosophy: PHIL 101, 222, 450
Political Science: PLSC 358, 359, 361

Free Electives: (3)	**6-20**
Total Degree Requirements:	**124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) No more than 6sh of CRIM 493 may be applied to 36sh minimum in major.
(3) Students selecting a minor may apply no more than 15sh outside College of Humanities and Social Sciences without special approval.

Minor—Criminology (1) (2) 18

Required Courses:

CRIM 102	Survey of Criminology	3sh
CRIM 210	Criminal Law	3sh
CRIM 300	Theory of Complex Criminal Justice Organizations	3sh
CRIM 306	Criminological Research Methods	3sh
CRIM 400	Theoretical Criminology	3sh
CRIM 401	Contemporary Issues in Criminology	3sh

(1) Must have formal criminology department approval to be admitted to minor in Criminology.
(2) Must have an overall 2.5 GPA to declare the minor.

Department of Economics

Nicholas Karatjas, Chairperson; Asamoah, Cross, Dyal, J. Jozefowicz, S. Jozefowicz, Martel, Radakovic, Radell; and professor emeritus Walker

Website: *http://www.iup.edu/economics*

Economics provides a background and educational base that open a broad range of professional, educational, and vocational opportunities. As part of a Humanities and Social Sciences degree, a Bachelor of Arts in Economics provides a liberal education as well as professional and technical training. Indeed, many students completing an undergraduate major in Economics do not pursue careers as professional economists; they enter such fields as law, management, finance, and labor relations. By helping to develop a student's ability to think and communicate, economics provides a firm foundation upon which the student can build any one of a large number of possible careers.

Four different degree programs are available: a Bachelor of Arts in Economics that prepares students for immediate employment or graduate school; a Bachelor of Arts in Economics/Pre-Law track for students who wish to attend law school; a Bachelor of Arts in Economics/Mathematics combining courses in both areas to prepare students for graduate study in economics as well as possible immediate employment; and the Bachelor of Science in Education that prepares students to teach economics and other social sciences in secondary schools.

The Department of Economics offers concentrations in seven areas of Economics. The concentrations are designed to equip students with the education and skills that will help to enable them to obtain a position in government or private business upon completion of the undergraduate program. The concentrations available at present are

- Competition and Public Policy
- Economics of Government Affairs
- International Economics
- Labor Economics
- Managerial Economics
- Monetary Economics
- Quantitative Economics

Detailed information regarding these concentrations may be obtained from the department chairperson. Concentrations are not restricted to Economics majors.

Either ECON 101 or 121 will count as a Liberal Studies social science course. However, ECON 101 is intended for students who will take only one course in the field. Students who anticipate taking more than one economics course should schedule ECON 121. ECON 101 will not count toward either a major or minor in economics and may not be taken after the successful completion of, or in concurrent registrations with, any other economics course.

Economics majors are encouraged to minor in one of the other Social Sciences, in Business, or in Mathematics.

The Department of Economics houses the Center for Economic Education. The center is a nonprofit, nonpartisan organization affiliated with both the Pennsylvania Partnership for Economic Education and the National Council on Economic Education. Its mission is to upgrade the quality of economic education in kindergarten through twelfth grade. The center performs the following functions: teacher training, consulting services, research, materials development, and programs in economic education for adults. Drs. James J. Jozefowicz and Arthur H. Martel are the co-directors of the center.

Bachelor of Arts—Economics

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-56
Social Science: ECON 121
Mathematics: MATH 110 or 121 (1)
Liberal Studies Electives: no courses with ECON prefix

College: 0-6
Foreign Language Intermediate Level (2)

Major: 24
Required Courses:

ECON 121	Principles of Economics I	*sh
ECON 122	Principles of Economics II	3sh
ECON 355	Statistics for Economists	3sh (3)
ECON 421	Macroeconomic Analysis	3sh
ECON 422	Microeconomic Analysis	3sh
MATH 121	Calculus I for Business, Natural, and Social Sciences	*sh (1)

Controlled Electives:
Four other ECON courses 12sh (4)

Free Electives: 38-47

Total Degree Requirements: 124

(1) MATH 123 or 127 may be substituted for MATH 121.
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(3) MATH 214, 217, or 363 may be substituted for ECON 355.
(4) No more than 6sh of internship credit may be applied toward major.

Bachelor of Arts—Economics/Pre-Law Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-56
Social Science: ECON 121
Mathematics: MATH 110 or 121 (1)
Liberal Studies Electives: no courses with ECON prefix

College: 0-6
Foreign Language Intermediate Level (2)

Major: 24
Required Courses:

ECON 121	Principles of Economics I	*sh
ECON 122	Principles of Economics II	3sh
ECON 355	Statistics for Economists (3)	3sh
ECON 421	Macroeconomic Analysis	3sh
ECON 422	Microeconomic Analysis	3sh
MATH 121	Calculus I for Business, Natural, and Social Sciences	*sh (1)

Controlled Electives:
Four other ECON courses 12sh (4)

Other Requirements: Pre-law interdisciplinary track 6-21
Seven courses, including at least one from each of six areas:
Business: ACCT 201, ACCT 202, BLAW 235
Criminology: CRIM 210, 260, 357
English: ENGL 212, 220, 310
History: HIST 320, 321, 346
Philosophy: PHIL 101, 222, 450
Political Science: PLSC 358, 359, 361

Free Electives: 17-36

Total Degree Requirements: 124

(1) MATH 123 or 127 may be substituted for MATH 121.
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(3) MATH 214, 217, or 363 may be substituted for ECON 355.
(4) No more than 6sh of internship credit may be applied toward major.

Bachelor of Arts—Economics/Mathematics

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 47-49
Social Science: ECON 121 (included in major)
Mathematics: MATH 123 (included in major)
Electives: Intermediate foreign language, no course with ECON or MATH prefix.

Major: 53-55
Core:

ECON 121	Principles of Economics I	3sh
ECON 122	Principles of Economics II	3sh
ECON 421	Macroeconomics Analysis	3sh
ECON 422	Microeconomics Analysis	3sh
MATH 123	Calculus I for Physics, Chemistry, and Mathematics	4sh
MATH 124	Calculus II for Physics, Chemistry, and Mathematics	4sh
MATH 171	Introduction to Linear Algebra	3sh
MATH 216 *or*	ECON 355 Probability and Statistics for Nat Sci or Statistics for Economics	3-4sh

Economics Electives: 12sh
Students are especially encouraged to take ECON 334 and 356, but any course except ECON 101 may be used. ECON 493 may be counted only with the approval of the program coordinator and only up to 6sh.
Mathematics Electives: 15-16sh
At least one of the following two-semester sequences:
MATH 241 and 371, MATH 363 and 364, MATH 445 and 446
Three additional courses either from the above or from the following:
MATH 271, 272, 342, 417 or 418, 421, 422, 423, 425, 427, 451, 465, 476, 477

Other Requirements: 0

Free Electives: 20-24

Total Degree Requirements: 124

Bachelor of Science in Education—Social Science Education/Economics Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
Social Science: PSYC 101, PLSC 111, ANTH 110 or 211
Mathematics: MATH 110 or 217 or 121
Liberal Studies Electives: GEOG 230, SOC 337

College: 32
Professional Education Sequence:

COMM 103	Digital Instructional Technology	3sh
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2sh
EDSP 102	Educational Psychology	3sh
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh
EDUC 242	Pre-student Teaching Clinical Exp I	1sh
EDUC 342	Pre-student Teaching Clinical Exp II	1sh
EDUC 441	Student Teaching	12sh
EDUC 442	School Law	1sh
EDUC 455	Teaching of Social Science in the Secondary Schools	3sh
FDED 102	American Ed in Theory and Practice	3sh

Major: 21
Required Economics Courses:

ECON 121	Principles of Economics I	3sh
ECON 122	Principles of Economics II	3sh

Controlled Economics Electives: 15sh
Upper-level Economics courses including at least one writing-intensive course and at least one course from each of the following three groups:
International courses: ECON 339, 345, 350, 351
Macroeconomic courses: ECON 325, 343, 421
Microeconomic courses: ECON 283, 330, 331, 332, 333, 335, 336, 373, 383

Other Requirements: 15-18
Required Social Science distribution

HIST 203	U.S. History for Historians	3sh
GEOG ___		3sh
PLSC 280 or PLSC 285	Comparative Government	3sh
Social Science Minor		6-9sh (1)

Free Electives: 0-3

Total Degree Requirements: 124

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.

(1) Students must complete a minor in a second Social Science of their choice. The coursework for each alternative is described below. Some of the courses chosen may also fulfill the third Liberal Studies elective course above.
1. Anthropology: ANTH 110 or 211, 12 additional sh in ANTH
2. Geography: GEOG 230 and 12 additional sh in GEOG
3. History: HIST 195, 203, 9 additional sh in HIST
4. Political Science: PLSC 111, 280 or 285, 9 additional sh in PLSC
5. Sociology: SOC 151, 237, 9 additional sh in SOC

Minor—Economics 15

Required Courses:

ECON 121	Principles of Economics I	3sh
ECON 122	Principles of Economics II	3sh
Three courses from ECON 200 or higher		9sh

Department of English

Donald S. McClure, Chair; Gail I. Berlin, Assistant Chair; Aghbar, Alvine, Bencich, Berlin, L. Black, Bower, Cahalan, Camp, Carse, Chow, Cumfort, Craig, Dandurand, Donna, Downing, Emerick, Fritz, Gatti, Gebhard, Goebel, M. Hayward, N. Hayward, B. Hudson, S. Hudson, Hurlbert, S. F. Johnson, Kilwein-Guevara, Kraszewski, Krupnik, Marsden, Masiello, McAndrew, McClenahan, McClure, McPherson, Murphy, Norris, Orchard, Pagnucci, Perdue, Huddleston Powers, Rafoth, Roffman, Savova, Sell, Shafer, Sitler, Slater, Smits, Stilwell, Tannacito, Vella, Villa, Ware, Watson, Welsh, Willen, M. M. Williamson, M. T. Williamson, J. Wilson, K. Wilson, Yang; and professors emeriti Anderson, Betts, J. Bright, L. Bright, Brown, Craig, Davis, Freund, Gray, Miller, Nania, Ray, Roumm, Seinfelt, Smith, Swigart, Watta, Woodworth

Website: *http://www.iup.edu/english*

The program of studies in the English Department at IUP focuses on critical thinking and effective reading and writing at all levels. English majors study a wide variety of subjects ranging from literary theory to practical pedagogy, in an atmosphere that encourages and fosters a high degree of professional commitment.

Course choices depend upon a student's career goals; three specialized majors are offered, each of which undergoes regular revision to reflect the needs of students and the structure of a changing, competitive job market.

The Bachelor of Arts in English Humanities offers a wide range of courses in both traditional and nontraditional areas, which allows students to tailor their programs to reflect their own interests and career plans.

English/Pre-Law track offers specialized training for those interested in a career in law or some related field.

The English Education program offers special training for prospective secondary school teachers. IUP's consistent success in placing graduates from this major in teaching positions suggests that the program is highly regarded among educators outside the university.

English Humanities

The English Department's Bachelor of Arts in Humanities curriculum emphasizes the traditional concerns of English literary study by providing a common core of four courses that provide students with a uniform background in English and American literature, after which they are offered a wide range of choices in six substantial areas of required study. These required and controlled-elective courses constitute 30 semester hours of a major that totals 36; the remaining courses can be any upper-level English elective offerings, but students are urged to explore possibilities carefully with their advisors so as to complete the program best suited to their future goals.

Specifically, after completing the four prerequisite courses and the Liberal Studies English requirements, students must take

- one Period Course (Category A)
- one Form and Theory of Genre Course (Category B)
- one Alternative Literatures Course (Category C)
- one European Tradition Course (Category D)
- one Major Authors Course (Category E)
- one Writing, Speech, Linguistics Course (Category F)

a minimum of ***two*** courses beyond these group requirements. These two courses may be from one or more of the groups, or may be Topics Courses in literature, film, or literary theory.

Students, especially those for whom the B.A. is a terminal degree, are encouraged to seek an internship in their junior or senior year as a means of developing and demonstrating the skills they have acquired.

Since the major can be completed with 36 semester hours of coursework, students have 27-35 semester hours outside of the Liberal Studies requirements, depending on their foreign language status, of unspecified coursework. Students should explore their options carefully with their advisor. Beyond the basic requirements of the major, opportunities exist for students to elect courses allowing them to concentrate further in such areas as writing, film, and British or U.S. literature.

English/Pre-Law Track

Successful lawyers possess excellent skills in writing and speaking and can analyze a problem and explain its solution in clear, logical terms. Pre-Law English prepares the student especially well in these areas and provides the skills and knowledge needed to do well in the law school admissions examination.

Most graduates have had successful internships in the offices of practicing attorneys and government agencies, although an internship remains optional. Students wishing an internship should contact the department director of internships early in their career at IUP.

Education Program

The English Department offers a program leading to the Bachelor of Science in Education degree in English Education. This program has been accredited by the National Council for Accreditation of Teacher Education (NCATE). Graduates are prepared to teach in middle, junior high, and senior high schools.

English Education majors fulfill all the requirements for state certification, including practical experience in methods courses and student teaching; content preparation in a variety of literature, language, and composition courses; and philosophical background in current theories of teaching. Although most students choosing an English Education major will be fitted both by training and desire for the secondary school classroom, those who opt not to teach will find that their speaking, writing, and management skills can be useful to the media, governmental services, and business.

Program requirements are available at the English Department office. Majors must maintain a minimum cumulative GPA of 2.6 (2001-02), 2.8 (2002-03), and 3.0 (2003 and beyond). They must be formally admitted to the Teacher Certification Program, a process which includes application and screening within the English Department. This screening involves review of the student's portfolio of written work and faculty evaluations, as well as an interview with English Education faculty. Refer to the section "Admission to Teacher Education and Certification" in the College of Education and Educational Technology section of this catalog and the English Education Handbook.

Minor in English

To minor in English, 15 semester hours in English are required beyond the Liberal Studies requirement of ENGL 101, 121, and 202.

Students who choose to minor in English should, if their major department concurs, substitute ENGL 122 for ENGL 121.

Bachelor of Arts—English

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Humanities Literature: ENGL 122
Liberal Studies Electives: no courses with ENGL prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 36
Required Courses:

ENGL 210	British Literature to 1660	3sh
ENGL 211	British Literature 1660-1900	3sh
ENGL 212	American Literature: Beginnings to 1900	3sh
ENGL 213	British and American Literature Since 1900	3sh

Controlled Electives: (2) (3) 24sh
One course from Category A (Period): ENGL 301, 302, 303, 304, 305, 306, 307, 315, 316, 317, 319
One course from Category B (Form and Theory of Genre): ENGL 208, 214, 215, 216, 217, 332, 335, 337, 338
One course from Category C (Alternative Literatures): ENGL 225, 344, 348, 385, 386, 396
One course from Category D (The European Tradition): ENGL 349, 354, 387, 391, 393, 394, 395
One course from Category E (Major Authors): ENGL 430, 432, 434, 436
One course from Category F (Writing, Speech, Linguistics): ENGL 220, 221, 310, 311, 312, 313, 320, 322, 325, 326, 329, 330, 333, 334, 336, 420, 422
Two courses from Category G: Any combination of 6sh from ENGL 281, 356, 357, 390, 401, 460, 461, 462, 481, 482, 493, and/or any other courses listed above under categories A through F.

Other Requirements: 0

Free Electives: (3) 27-35

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Any ENGL 281, 481, or 482 course must have prior approval from department chair if it is to apply to the student's major other than in Category G.
(3) An internship, aside from counting for 6sh toward the major, makes the B.A. degree recipient much more employable by providing job experience. Students should see the English B.A. Program Internship Director for advice about available openings.

Bachelor of Arts—English/Pre-Law Track

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Humanities Literature: ENGL 122
Liberal Studies Electives: no courses with ENGL prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 36
Required Courses:

ENGL 210	British Literature to 1660	3sh
ENGL 211	British Literature 1660-1900	3sh
ENGL 212	American Literature: Beginnings to 1900	3sh
ENGL 213	British and American Literature Since 1900	3sh

Controlled Electives: (2) (3) 24sh
One course from Category A (Period): ENGL 301, 302, 303, 304, 305, 306, 307, 315, 316, 317, 319
One course from Category B (Form and Theory of Genre): ENGL 208, 214, 215, 216, 217, 332, 335, 337, 338

One course from Category C (Alternative Literatures): ENGL 225, 344, 348, 385, 386, 396
One course from Category D (The European Tradition): ENGL 349, 354, 387, 391, 393, 394, 395
One course from Category E (Major Authors): ENGL 430, 432, 434, 436
One course from Category F (Writing, Speech, Linguistics): ENGL 220, 221, 310, 311, 312, 313, 320, 322, 325, 326, 329, 330, 333, 334, 336, 420, 422
Two courses from Category G: Any combination of 6sh from ENGL 281, 356, 357, 390, 401, 460, 461, 462, 481, 482, 493, and any other courses listed above under categories A through F.

Other Requirements: Pre-law interdisciplinary track 3-21
Seven courses, including at least one from each of six areas:
Business: ACCT 201, ACCT 202, BLAW 235
Criminology: CRIM 210, 260, 357
Economics: ECON 121, 122, 332
History: HIST 320, 321, 346
Philosophy: PHIL 101, 222, 450
Political Science: PLSC 358, 359, 361

Free Electives: (3) 6-26

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Any ENGL 281, 481, or 482 course must have prior approval from department chair if it is to apply to the student's major other than in Category G.
(3) An internship with a law firm, public agency, or legislative office greatly strengthens law school applications.

Bachelor of Science in Education—English Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
Humanities–Literature: ENGL 122
Fine Arts: THTR 101
Social Science: PSYC 101
Liberal Studies Electives: Intermediate-Level Foreign Language, no courses with ENGL prefix

College: 30
Professional Education Sequence: (1)

COMM 103	Digital Instructional Technology	3sh
EDSP 102	Educational Psychology	3sh
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh
EDUC 242	Pre-student Teaching Clinical Exp I	1sh
EDUC 342	Pre-student Teaching Clinical Exp II	1sh
EDUC 441	Student Teaching	12sh
EDUC 442	School Law	1sh
EDUC 452	Teaching of English and Communication in the Secondary School	3sh
FDED 102	American Ed in Theory and Practice	3sh

Major: 40
Required Courses:

ENGL 212	American Literature: Beginnings to 1900	3sh
ENGL 220	Advanced Composition I	3sh
ENGL 314	Speech and Communication in the Secondary English Classroom	3sh
ENGL 318	Literature for Adolescents	3sh
ENGL 323	Teaching Literature and Reading in the Secondary School	3sh
ENGL 324	Teaching and Evaluating Writing	3sh
ENGL 329	The History of the English Language	1sh
ENGL 330	The Structure of English	3sh
ENGL 434	Shakespeare	3sh

Controlled Electives:
Choose one Genre course: ENGL 214, 215, 216, 217 3sh
Choose one British Literature Survey: ENGL 210, 211 3sh
Choose one Theme course: ENGL 344, 348, 386 3sh
Choose two additional courses from list: ENGL 208, 210, 211, 213, 214, 215, 216, 217, 221, 319, 320, 322, 333, 336, 337, 344, 348, 386 6sh

Other Requirements: 0

Free Electives: 2-4

Total Degree Requirements: 124

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EDEX 301 (2sh).

Department of French and German

Renee P. Liscinsky, Chairperson; Brode, Henry, Hurt, Jones, McCreary. Op de Beeck, Ready, Sullivan, Wallaert; and professors emeriti Fisel, Whitmer

Website: *http://www.iup.edu/french-german*

The Department of French and German offers a varied curriculum designed to provide not only basic language instruction but also the more advanced competencies needed by language specialists and students hoping to take advantage of an international study experience.

French

For the French major, the department has three degree programs: the B.A. in French, the B.A. in French for International Trade, and the B.S.Ed. in French Education (K-12). The degree program in French for International Trade provides the solid undergraduate training preparatory to an M.B.A in International Marketing and Finance.

Students majoring in French will acquire proficiency in all phases of language and enter more deeply into the history, culture, and literature of Francophone countries. They will also gain knowledge of the linguistic development of the language throughout the centuries. French majors generally find employment in government work, librarianship, journalism, foreign trade, airlines, tourism, business, and teaching. Students choosing careers as teachers will find the close supervision and advanced methodology offered by the department a distinct asset.

College Language Requirements

Students in the College of Humanities and Social Sciences and in most departments of the College of Natural Sciences and Mathematics must pass the intermediate sequence of a foreign language (in French, FRNC 201-202 or FRNC 203) or demonstrate that they have somehow acquired the equivalent proficiency level. Students from the other colleges may choose to take French (FRNC 201 and 202 or the accelerated FRNC 203) to fulfill a Liberal Studies elective. Any student who chooses French has an option to enroll in the traditional three-credits-per-semester courses or the accelerated 6-semester-hour track.

Placement/Exemption

The student with no previous French study will take FRNC 101 (4sh) as a prerequisite. Students with previous French study will be placed into the appropriate course level by means of a written departmental exam administered in the summer for entering freshmen and during the first week of the semester for other students. No student judged to be a native speaker of French will be allowed to enroll in any course below the 300 level, with the exception of FRNC 254.

Study Abroad – Nancy, France

IUP has established a study abroad center in Nancy, France. All majors are encouraged to participate in the Study Abroad Program, especially those seeking the International Trade degree. Students have an option to participate in a full-year or one-semester (spring) program. A six-week summer session has also been added to the options available. Nonmajors

may be accepted into any of the programs and, unless they have advanced proficiency, must enter the language courses offered in the *Cours pour Etrangers* (Courses for Foreign Students). All foreign program credits are evaluated by the department as transfer credits. For further information about cost and application procedures, contact the French and German Department.

Internships

The Department of French and German, through contacts with certain French companies and through its affiliation with the ICN (*Institut Commercial de Nancy*), is able to place interns in Paris and other sites in France. The internship (generally 6 to 12 semester hours) is viewed as a highly desirable culminating experience following study in Nancy. For further information, contact the department at least six months in advance.

Bachelor of Arts—French

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			53-55
Liberal Studies Electives: no courses with FRNC prefix			
College:			0
Foreign Language (included in major)			
Major:			36
Required Courses:			
FRNC 202	College French II	3sh	
FRNC 254	Civilization of Modern France	3sh	
FRNC 331	Intermediate French Conversation	3sh	
FRNC 341	French Grammar	3sh	
FRNC 353	Intermediate French Composition	3sh	
FRNC 370	Introduction to French Literature	3sh	
FRNC 373	French Civilization	3sh	
FRNC 375	French Literature from Medieval through 17th Century	3sh	
FRNC 376	French Literature from 18th through 20th Century	3sh	
FRNC 441	Advanced French Grammar	3sh	
Controlled Electives:			
One course from: FRNC 431, 432, 460, 462, 463		3sh	
Any other 3sh from FRNC 253 and above (or study abroad)		3sh	
Free Electives:			33-35
Total Degree Requirements:			124

Bachelor of Arts—French for International Trade

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			54-58
Mathematics: Any LBST math course except MATH 217			
Social Science: ECON 121, PLSC 101, PSYC 101			
Liberal Studies Electives: BTED/COSC/IFMG101, ECON 122, MATH 214, no course with FRNC prefix			
College:			0
Foreign Language (included in major)			
Major:			36
Required Courses:			
FRNC 202	College French II	3sh	
FRNC 254	Civilization of Modern France	3sh	
FRNC 331	Intermediate French Conversation	3sh	
FRNC 341	French Grammar	3sh	
FRNC 353	Intermediate French Composition	3sh	
FRNC 354	Business French	3sh	
FRNC 370	Introduction to French Literature	3sh	
FRNC 373	French Civilization	3sh	
FRNC 441	Advanced French Grammar	3sh	
Controlled Electives: (1)			
One course from: FRNC 375, 376		3sh	
Two additional FRNC electives (advanced levels)		6sh	
Other Requirements:			
Business Sequence: (2)			21
ACCT 201	Accounting Principles I	3sh	
ACCT 202	Accounting Principles II	3sh	
BLAW 235	Legal Environment of Business	3sh	
BTST 321	Business and Interpersonal Comm	3sh	
FIN 310	Finance I	3sh	
MGMT 310	Principles of Management	3sh	
MGMT 350	International Business	3sh	
MKTG 320	Principles of Marketing	3sh	
Free Electives:			6-10
Total Degree Requirements:			124

(1) Most students earn additional language semester hours (up to 18) in semester or year abroad programs.

(2) Students not majoring in business may count a maximum of 30sh in business coursework toward the 124sh-degree minimum. Business semester hours in excess of 30 will be permitted only as semester hours beyond the 124 required for graduation.

Bachelor of Science in Education—K-12 French Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			53-55
Social Science: ANTH 110 or 211 and PSYC 101			
Liberal Studies Electives: no courses with FRNC prefix			
College:			32
Professional Education Sequence:			
COMM 103	Digital Instructional Technology	3sh	
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2sh	
EDSP 102	Educational Psychology	3sh	
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh	
EDUC 242	Pre-student Teaching Clinical Exp I	1sh	
EDUC 342	Pre-student Teaching Clinical Exp II	1sh	
EDUC 441	Student Teaching	12sh	
EDUC 442	School Law	1sh	
EDUC 453	Teaching of Foreign Languages in the Elementary/Secondary Schools	3sh (1)	
FDED 102	American Ed in Theory and Practice	3sh	
Major:			33
Required Courses:			
FRNC 202	College French II	3sh	
FRNC 331	Intermediate French Conversation	3sh	
FRNC 341	French Grammar	3sh	
FRNC 353	Intermediate French Composition	3sh	
FRNC 370	Introduction to French Literature	3sh	
FRNC 373	French Civilization	3sh	
FRNC 432	French Phonetics and Phonology	3sh	
FRNC 441	Advanced French Grammar	3sh	
Controlled Electives:			
Any other 9sh from FRNC 253 and above (or study abroad)		9sh	
Other Requirements:			0
Free Electives:			4-6
Total Degree Requirements:			124

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.

(1) EDUC 453 is offered only in fall semester.

Minor—French **21**

Required Courses:

FRNC 201	College French I	3sh
FRNC 202	College French I	3sh
FRNC 331	Intermediate French Conversation	3sh
FRNC 341	French Grammar	3sh
FRNC 353	Intermediate French Composition	3sh
FRNC 370	Introduction to French Literature	3sh

Controlled Elective:

One course from: FRNC 253, 373, 375, 376, 431, 432 3sh

German

For the German major, the department has three degree programs: the B.A. in German, the B.A. in German for International Trade, and the B.S. in Education in Secondary German Education.

While majoring in the German, students will acquire proficiency in all phases of the language and develop an understanding and appreciation of the history, culture, and literature of the German-speaking countries. They will also gain knowledge of the linguistic development of the language throughout the centuries. German majors may look forward to rewarding careers in teaching, government, journalism, foreign trade, tourism, business, and librarianship.

The degree program in German for International Trade provides an excellent way to combine language proficiency and cultural awareness in German with professional training in business. With this undergraduate background, students may enter M.B.A. degree programs and pursue careers in international business and trade. Study abroad for one or two semesters is strongly urged and is an integral part of the program. Qualified students may also choose to participate in internship programs with German-based corporations and financial institutions.

College Language Requirements

Students in the departments of the College of Humanities and Social Sciences and in most departments of the College of Natural Sciences and Mathematics must pass the intermediate sequence of a foreign language (GRMN 251 and 252) or demonstrate by the CLEP exam in German that they have acquired the equivalent proficiency level. Students from the other colleges may elect to take two courses in German at the intermediate (III/IV) level toward fulfilling the requirement for Liberal Studies electives. Any student who chooses German can meet the requirement through enrollment in the traditional, 3-semester-hour courses or in the combined 6-semester-hour courses.

Study Abroad

The department encourages all students who study German at IUP to consider study abroad for one or two semesters. German majors are strongly urged to study two semesters or one academic year at a German university. To provide this opportunity at a relatively modest cost, the university has arranged an exchange of students between Duisburg University and IUP. By participating in this or other approved programs, students can earn from 12 to 14 semester hours per semester. For further information regarding the cost and application procedures, contact the office of the dean of the College of Humanities and Social Sciences.

Minor in German

Students completing 18 semester hours beyond GRMN 152 will be recognized as having minored in German. Nine of the twelve semester hours must be taken at the 300 level with only 3 semester hours from the conversation sequence. GRMN 221, 222, 321, 322. This achievement will be noted on the student's transcript and thus provide more career flexibility.

Bachelor of Arts—German

Liberal Studies: 53-55
As outlined in Liberal Studies section
with the following specifications:
Liberal Studies Electives: no courses with GRMN prefix

College: 0
Foreign language (included in major)

Major: 36

Required Courses:

GRMN 221	Conversation III	2sh
GRMN 222	Conversation IV	2sh
GRMN 251	German III	3sh
GRMN 252	German IV (1)	3sh
GRMN 321	Advanced Conversation I	1sh
GRMN 322	Advanced Conversation II	1sh
GRMN 351	Advanced German Language I	3sh
GRMN 352	Advanced German Language II	3sh
GRMN 361	Development of German Culture and Literature I	3sh
GRMN 362	Development of German Culture and Literature II	3sh

Controlled Electives:

Other GRMN electives (advanced levels) 12sh (2)

Other Requirements: 0

Free Electives: 33-35

Total Degree Requirements: 124

(1) GRMN 253 or 254 may be substituted for GRMN 252.
(2) Department recommends at least one additional literature course (GRMN 363-371) and one linguistics course (GRMN 410 or in Germany).

Bachelor of Arts—German for International Trade

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-56
Mathematics: MATH 121
Social Science: ECON 121
Liberal Studies Electives: MATH 214, no courses with GRMN prefix

College: 0
Foreign language (included in major)

Major: 36

Required Courses:

GRMN 221	Conversation III	2sh
GRMN 222	Conversation IV	2sh
GRMN 251	German III	3sh
GRMN 252	German IV	3sh
GRMN 253	Intermediate Composition and Conversation	3sh
GRMN 254	Business German	3sh
GRMN 321	Advanced Conversation I	1sh
GRMN 322	Advanced Conversation II	1sh
GRMN 351	Advanced German Language I	3sh
GRMN 352	Advanced German Language II	3sh
GRMN 361	Development of German Culture and Literature I	3sh
GRMN 362	Development of German Culture and Literature II	3sh

Controlled Electives:

Two additional GRMN electives (advanced levels) 6sh (1)

Other Requirements: Business Sequence: 33

ACCT 201	Accounting Principles I	3sh
ACCT 202	Accounting Principles II	3sh
BLAW 235	Legal Environment of Business	3sh
BTST 321	Business and Interpersonal Comm	3sh
ECON 122	Principles of Economics II	3sh
IFMG 300	Info Systems: Theory and Practice	3sh
FIN 310	Finance I	3sh
MGMT 311	Human Behavior in Organizations	3sh
MGMT 360	Management and Production Concepts	3sh
MKTG 320	Principles of Marketing	3sh
QBUS 215	Business Statistics	3sh

Free Electives: 0-1

Total Degree Requirements: 124

(1) Most students earn additional language semester hours (usually 12-14) in semester study abroad.

Bachelor of Science in Education—Secondary German Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			53-55
Social Sciences: PSYC 101			
Liberal Studies Electives: no courses with GRMN prefix			
College:			30
Professional Education Sequence: (1)			
COMM 103	Digital Instructional Technology	3sh	
EDSP 102	Educational Psychology	3sh	
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh	
EDUC 242	Pre-student Teaching Clinical Exp I	1sh	
EDUC 342	Pre-student Teaching Clinical Exp II	1sh	
EDUC 441	Student Teaching	12sh	
EDUC 442	School Law	1sh	
EDUC 453	Teaching of Foreign Languages in the Elementary/Secondary Schools	3sh	
FDED 102	American Ed in Theory and Practice	3sh	
Major:			33
Required Courses:			
GRMN 221	Conversation III	2sh	
GRMN 222	Conversation IV	2sh	
GRMN 251	German III	3sh	
GRMN 252	German IV	3sh (2)	
GRMN 321	Advanced Conversation I	1sh	
GRMN 322	Advanced Conversation II	1sh	
GRMN 351	Advanced German Language I	3sh	
GRMN 352	Advanced German Language II	3sh	
GRMN 361	Development of German Culture and Literature I	3sh	
GRMN 362	Development of German Culture and Literature II	3sh	
Controlled Electives:			
Other GRMN electives		9sh	
Other Requirements:			0
Free Electives:			6-8
Total Degree Requirements:			124

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.

(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EDEX 301 (2sh).

(2) GRMN 253 may be substituted for or taken in addition to GRMN 252.

Department of Geography and Regional Planning

Robert P. Sechrist, Chairperson; Begg, Bencloski, Benhart, Buckwalter, Masilela, Okey, Patrick, G. Sechrist, Shirey, Watts; and professors emeriti Forbes, Gault, Miller, Tepper, Weber

Website: *http://www.iup.edu/geography*

The Department of Geography and Regional Planning offers three separate degree programs for the geographer, planner, and teacher.

Geography has several traditions of study. Two of the more important traditions are the study of relationships between humans and environment, or the ecological tradition, and the study of spatial organization, which involves the way people use space on the earth's surface. In both traditions the focus is on understanding regions of the world and the interactions within and between them. Geographers make important contributions to the understanding of all aspects of humankind's use of and impact on the earth's surface.

Regional Planning involves preparing for the future. The demands and effects of a large and growing population require that land use, resource use, settlement patterns, transportation systems, and economic activity be planned. Regional planning is concerned with the social, locational, and environmental aspects of these planning decisions. Today, economic development has become an important focus for planners.

The geography track in social science education offers a geography major equivalent for the student interested in teaching at the junior or senior high levels. The Pennsylvania certification will be in citizenship. New education requirements instituted for the commonwealth specify that geography be taught at all levels in Pennsylvania. Nationally, geography is one of the core subject areas named in the National Education Goals program.

Geography and Regional Planning are in the same department, because "Planning is the art of which geography is the science." Employment opportunities for geographers and regional planners are excellent. Geography and planning occupations have been identified among the fastest growing job fields by *U.S. News and World Report*. Alumni occupy a wide variety of positions in government, business, industry, planning, and education. Environmental, locational, and spatial knowledge gained in the department's programs provide skills desperately needed in today's job market. Students interested in obtaining additional career information should visit the departmental office in Room 10, Leonard Hall or visit our website at *www.iup.edu/geography*.

Three degree programs are offered by the department: Bachelor of Arts in Geography, Bachelor of Science in Regional Planning, and Bachelor of Science in Social Science Education/Geography Track.

In addition to the geography core (GEOG), there are four tracks for specific geographic competencies: GIS/Cartographer, Environmental Geographer, Economic Geographer, and General Geographer. The regional planning (RGPL) major offers specific career opportunities in four somewhat parallel tracks: GIS/Cartographer, Environmental Planner, Economic Planner, and Town Manager.

A minor in geography or regional planning is appropriate for majors in all other fields of the natural and social sciences. Students in marketing and information systems will find a minor in either field relevant. A minor consists of 15 semester hours in GEOG or RGPL courses. The department suggests students take the core in either program if graduate study is anticipated.

Department resources, which include the James E. Payne GIS Cartography Lab, offer access to advanced geographic analysis equipment and resources. The fully equipped computer lab also houses color printers, digitizers, large-format plotters and scanners, and appropriate mapping software. The most heavily used software includes ARC/INFO, ArcView, MapInfo, Atlas*GIS, IDRISI, AutoCAD, and MiniCAD.

An important part of student education is involvement in community service projects. The Spatial Sciences Research Center (SSRC), Robert Wilson, director, coordinates these projects and student skills and interests. Students are usually compensated for their efforts. The SSRC has facilities for GIS database development and, GIS analysis, atlas production, map compilation, and cartographic production. Examples of SSRC projects include: Huntingdon County GIS; Cranberry Twp., Butler County GIS; Indiana Borough GIS; PA One Call System (call before you dig) GIS; Blacklick Creek Watershed Plan and Implementation; Pennsylvania Soil Mapping Project; Pennsylvania Department of Labor and Industry; United States Department of Transportation Pipeline Mapping Repository.

The department also houses the Census Documents and Data Library, coordinated by Rebecca Reinhold. In conjunction with Stapleton Library, holdings include population/housing/socioeconomic mapping database CDs and other publications used for teaching, research, and planning in community service and local and county governments. The department is also an affiliate of the Bureau of Economic Analysis at the Census Bureau and a repository for USGS digital data.

The department houses both the National Council for Geographic Education (NCGE), which serves geography educators at all levels with activities and programs that address geography learning and instructional and research issues in North America, and the Pennsylvania Geographic Alliance (PGA), which is supported by the Pennsylvania Department of Education. PGA provides leadership and professional development opportunities in geography teaching and learning in Pennsylvania. Ruth Shirey is executive director of NCGE and one of two PGA coordinators in Pennsylvania.

A strong internship program directed by John E. Benhart offers placement in industry, engineering, conservation, land management, and planning agencies at the local, state, and federal levels.

Specific core requirements in Geography and Regional Planning offer a structured approach for majors. Appropriate subfields or tracks are available in both programs to prepare students for graduate work and to support different career options for majors. There are four tracks for the geography major and four tracks for the regional planning major.

- **Geography–General Geography Track**
  The General Geography Track encourages the major to sample courses from different subfields of the discipline. This track prepares the major for graduate work in geography and related fields of employment. Job options include report writing, research analysis, and data gathering. In government employment, the State Department, Department of Commerce, and the Census Bureau are significant places for geography skills.
- **Geography–Geographic Information Systems and Cartographer Track**
- **Regional Planning–Geographic Information Systems and Cartographer Track**
  The Geographic Information Systems and Cartographer Track prepares students for employment as Geographic Information System Specialists, Facilities Managers, Cartographers, and Remote Sensing professionals. Coursework includes methods for identifying, modeling, and analyzing the spatial organization of human and environmental systems from both practical and theoretical perspectives. Data collection, spatial information management, and graphic presentation are integral skills taught in track courses. Such skills could be used, for example, for analysis of wildlife habitat, utility facility management, or transportation system design and maintenance.
- **Geography–Economic Geographer Track**
- **Regional Planning–Economic Developer Track**
  The Economic Track provides a broad framework of ideas and theories in addition to a task-oriented approach to location analysis. Site planners articulate the needs of the community for economic space, the demands for convenient transport, the role of private enterprise, and the management of growth. This interrelated group of courses is useful to students, because economic geographers and developers are expected to analyze the interactions of concepts and variables. Market analysis for the location of new shopping centers, for example, requires understanding of economic principles, population characteristics, and the local political milieu, all in a spatial context.
- **Geography–Environmental Geographer Track**
- **Regional Planning–Environmental Planner Track**
  The Environmental Track is designed to prepare majors in geography or regional planning for careers in environmental fields or graduate study that leads to a variety of environmental positions. Students who elect this track will acquire knowledge of the physical and human processes that shape the environment, strategies for analyzing environmental issues, and concepts that underlie strategies for ameliorating environmental problems. The skills acquired in this track will enable students to assess the causes, consequences, and solutions to a wide variety of environmental issues such as water pollution, acid rain, or tropical deforestation.
- **Regional Planning–Town Manager Track**
  The Town Manager Track is designed to prepare planning students for careers in local government and graduate work in public administration. Students electing this track will become familiar with the structure, operation, and actions of municipal government and the political, organizational, and institutional basis of municipal management and decision making. Skills acquired with this track will enable students to undertake a variety of analytic activities designed to describe, project, and prescribe courses of action for municipal improvement.

Bachelor of Arts—Geography/General Geography Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **53-58**
Mathematics: MATH 121 or 217
Liberal Studies Electives: no courses with GEOG prefix

College:
Foreign Language Intermediate Level (1) **0-6**

Major: **36**
Required Courses:

GEOG 213	Cartography I	3sh
GEOG 230	Cultural Geography	3sh
GEOG 231	Economic Geography	3sh
GEOG 411	History of Geography	3sh
GEOG 412	Research Seminar	3sh

Controlled Electives:

One course from GEOG 251-257	3sh
One course from GEOG 341-342	3sh
Five courses (15sh) from any GEOG courses (only one GEOG 100-level course permitted)	15sh

Free Electives: **24-35**

Total Degree Requirements: **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Arts—Geography/GIS and Cartographer Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **53-58**
Mathematics: MATH 121 or 217
Liberal Studies Electives: BTED/COSC/IFMG101 recommended, no courses with GEOG prefix

College:
Foreign Language Intermediate Level (1) **0-6**

Major: **36**
Required Courses:

GEOG 213	Cartography I	3sh
GEOG 230	Cultural Geography	3sh
GEOG 231	Economic Geography	3sh
GEOG 411	History of Geography	3sh
GEOG 412	Research Seminar	3sh

Controlled Electives:

One course from GEOG 251-257	3sh
One course from GEOG 341-342	3sh

Track Courses:

GEOG 313	Cartography II	3sh
GEOG 314	Map and Photograph Interpretation	3sh
GEOG 316	Intro to Geographic Information Systems	3sh
GEOG 415	Remote Sensing	3sh
GEOG 417	Technical Issues in GIS	3sh

Free Electives: **24-35**

Total Degree Requirements: **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Arts—Geography/Economic Geographer Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54-60**
Mathematics: MATH 121 or 217
Social Sciences: ECON 121
Liberal Studies Electives: ECON 122, no courses with GEOG prefix

College:
Foreign Language Intermediate Level (1) **0-6**

Major: **36**
Required Courses:

GEOG 213	Cartography I	3sh
GEOG 230	Cultural Geography	3sh
GEOG 231	Economic Geography	3sh
GEOG 411	History of Geography	3sh
GEOG 412	Research Seminar	3sh

Controlled Electives:

One course from GEOG 251-257	3sh
One course from GEOG 341-342	3sh

Track Courses:

GEOG 331	Population Geography	3sh
GEOG 332	Urban Geography	3sh
GEOG 333	Trade and Transportation	3sh
GEOG 334	Political Geography	3sh

GEOG 464	Land Use Policy	3sh	
Free Electives:			22-34
ECON 383	Urban/Regional Economics (recommended)		
Total Degree Requirements:			124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Arts—Geography/Environmental Geographer Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Mathematics:** MATH 121 or 217 **Liberal Studies Electives:** COSC/IFMG/BTED 101 recommended, no courses with GEOG prefix — **53-58**

College:
Foreign Language Intermediate Level (1) — **0-6**

Major: — **36**

Required Courses:

GEOG 213	Cartography I	3sh
GEOG 230	Cultural Geography	3sh
GEOG 231	Economic Geography	3sh
GEOG 411	History of Geography	3sh
GEOG 412	Research Seminar	3sh

Controlled Electives:

One course from GEOG 251-257		3sh
One course from GEOG 341-342		3sh (2)

Track Courses: Five of the following:

GEOG 314	Map and Photograph Interpretation	3sh
GEOG 316	Intro to Geographic Information Systems	3sh
GEOG 335	Geography of Energy	3sh
GEOG 341	Climatology	3sh
GEOG 342	Physiography	3sh
GEOG 343	Geography of Fresh Water Resources	3sh
GEOG 415	Remote Sensing	3sh
GEOG 440	Conservation: Environmental Analysis	3sh

Free Electives: — **24-35**

Total Degree Requirements: — **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) The same course cannot also count in the track.

Bachelor of Science—Regional Planning/GIS and Cartographer Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Mathematics:** MATH 121 or 217 **Liberal Studies Electives:** BTED/COSC/IFMG 101 recommended, no courses with RGPL prefix — **53-58**

College:
Foreign Language Intermediate Level (1) — **0-6**

Major: — **42**

Required Courses in Planning:

RGPL 213	Cartography I	3sh
RGPL 316	Intro to Geographic Information Systems	3sh
RGPL 350	Introduction to Planning	3sh
RGPL 352	Planning Methods	3sh
RGPL 353	Planning Design I	3sh
RGPL 412	Research Seminar	3sh
RGPL 454	Planning Design II	3sh
RGPL 458	Land Use Law	3sh
RGPL 464	Land Use Policy	3sh
RGPL 468	Planning Theory	3sh

Track Courses:

RGPL 313	Cartography II	3sh
RGPL 314	Map and Photograph Interpretation	3sh
RGPL 415	Remote Sensing	3sh
RGPL 417	Technical Issues in GIS	3sh

Free Electives: — **24-29**

RGPL 493	Internship (strongly recommended)	1-12sh

Total Degree Requirements: — **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Regional Planning/Economic Developer Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Mathematics:** MATH 121 or 217 **Social Sciences:** ECON 121 **Liberal Studies Electives:** ECON 122, no courses with RGPL prefix — **53-58**

College:
Foreign Language Intermediate Level (1) — **0-6**

Major: — **42**

Required Courses in Planning:

RGPL 213	Cartography I	3sh
RGPL 316	Intro to Geographic Information Systems	3sh
RGPL 350	Introduction to Planning	3sh
RGPL 352	Planning Methods	3sh
RGPL 353	Planning Design I	3sh
RGPL 412	Research Seminar	3sh
RGPL 454	Planning Design II	3sh
RGPL 458	Land Use Law	3sh
RGPL 464	Land Use Policy	3sh
RGPL 468	Planning Theory	3sh

Track Courses: Four of the following:

GEOG 231	Economic Geography	3sh
GEOG 331	Population Geography	3sh
GEOG 334	Political Geography	3sh
RGPL 332	Urban Geography	3sh
RGPL 333	Trade and Transportation	3sh

Free Electives: — **24-29**

RGPL 493	Internship (strongly recommended)	1-12sh

Total Degree Requirements: — **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Regional Planning/Environmental Planner Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Mathematics: MATH 121 or 217** **Liberal Studies Electives:** BTED/COSC/IFMG101 recommended, no courses with RGPL prefix — **53-58**

College:
Foreign Language Intermediate Level (1) — **0-6**

Major: — **42**

Required Courses in Planning:

RGPL 213	Cartography I	3sh
RGPL 316	Intro to Geographic Information Systems	3sh
RGPL 350	Introduction to Planning	3sh
RGPL 352	Planning Methods	3sh
RGPL 353	Planning Design I	3sh
RGPL 412	Research Seminar	3sh
RGPL 454	Planning Design II	3sh
RGPL 458	Land Use Law	3sh
RGPL 464	Land Use Policy	3sh
RGPL 468	Planning Theory	3sh

Track Courses: Four of the following:

GEOG 335	Geography of Energy	3sh	
GEOG 341	Climatology	3sh	
GEOG 342	Physiography	3sh	
GEOG 343	Geography of Fresh Water Resources	3sh	
GEOG 440	Conservation: Environmental Analysis	3sh	
RGPL 314	Map and Photograph Interpretation	3sh	
RGPL 415	Remote Sensing	3sh	
Free Electives:			**24-29**
RGPL 493	Internship (strongly recommended)	1-12sh	
Total Degree Requirements:			**124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Regional Planning/Town Manager Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **53-58**
Mathematics: MATH 121 or 217
Social Science: PLSC 111 recommended
Liberal Studies Electives: GEOG 230, BTED/COSC/IFMG101, no courses with RGPL prefix

College:
Foreign Language Intermediate Level (1) **0-6**

Major: **42**
Required Courses in Planning:

RGPL 213	Cartography I	3sh
RGPL 316	Intro to Geographic Information Systems	3sh
RGPL 350	Introduction to Planning	3sh
RGPL 352	Planning Methods	3sh
RGPL 353	Planning Design I	3sh
RGPL 412	Research Seminar	3sh
RGPL 454	Planning Design II	3sh
RGPL 458	Land Use Law	3sh
RGPL 464	Land Use Policy	3sh
RGPL 468	Planning Theory	3sh

Track Courses:
Either:

PLSC 354 ***and***	355 Metropolitan Problems/	3sh
	Intergovernmental Relations	3sh
Or:		
PLSC 370 ***and***	371 Introduction to Public Admin/	3sh
	Issues in Public Administration	3sh

And two of the following:

GEOG 231	Economic Geography	3sh
RGPL 332	Urban Geography	3sh
RGPL 333	Trade and Transportation	3sh

Free Electives:			**24-29**
PLSC 251	State and Local Political Systems (recommended)	3sh	
RGPL 493	Internship (strongly recommended)	1-12sh	
Total Degree Requirements:			**124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science in Education—Social Science Education/Geography Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54-55**
Social Science: ECON 121, GEOG 102, PSYC 101
Liberal Studies Electives: ECON 122, SOC 337 or 362 (1), and one of the following: ANTH 271-274 (SOC 271-274)

College: **32**
Professional Education Sequence:

COMM 103	Digital Instructional Technology	3sh
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Programs	2sh
EDSP 102	Educational Psychology	3sh
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh
EDUC 242	Pre-student Teaching Clinical Exp I	1sh
EDUC 342	Pre-student Teaching Clinical Exp II	1sh
EDUC 441	Student Teaching	12sh
EDUC 442	School Law	1sh
EDUC 455	Teaching of Social Science in Secondary Schools	3sh
FDED 102	American Ed in Theory and Practice	3sh

Major: **24**
Required Courses:

GEOG 213	Cartography I	3sh
GEOG 230	Cultural Geography	3sh

Controlled Electives:
At least two courses from each of the following three groups:
Environmental Geography: GEOG 341, 342, 343, 440
Human Geography: GEOG 231, 331, 332, 333, 334, 335, 336, 337, 431
Regional Geography: GEOG 251, 252, 253, 254, 255, 256, 257

Social Science Distribution Requirements: **15-18**
Required Courses:

HIST 203	United States History for Historians	3sh
PLSC 280	Comparative Government I: Western Political Systems	3sh

Plus one of the following options: 9-12sh

1. 6 additional sh not counted above in one social science field (history recommended) and 3sh in another.
2. 9-12 additional sh in one social science field (history recommended), sufficient to meet the requirements for a minor.

Other Requirements:	**0**
Free Electives:	**0**
Total Degree Requirements:	**125-129**

(1) The SOC 151 prerequisite will be waived with instructor permission if a student has completed ANTH/SOC 271-274.

Department of History

Gary L. Bailey, Chairperson; Baumler, Bodle, Botelho, Cashdollar, Finegan, Franklin-Rahkonen, Lu, Mannard, Marcus, McDonough, Ricketts, Schroeder, Vogel, Wang, Whited; and professors emeriti Cord, Fricke, Gallanar, Gelbach, Goodrich, Hatfield, Larner, Lehman, Mastro, Mervine, Miller, Oliver, Rife, Smith, Wiley

Website: *http://www.iup.edu/history*

Programs in history are designed to give both those who major in history in the College of Humanities and Social Sciences and those who concentrate in history in the College of Education and Educational Technology an opportunity to study in some depth the past story of peoples and their world. Degrees offered by the History Department are the Bachelor of Arts in History and the Bachelor of Science in Education with a major in Social Science, concentrating in history. The first program is under the College of Humanities and Social Sciences, and the second is under the College of Education and Educational Technology.

The history student will find that the program is excellent preparation for government service, for pre-law training, for broad business opportunities, for work in varied fields of journalism, for archival positions, and for teaching. Not only the story of the people of the United States but also that of other peoples is covered, in the belief that global historical understanding is essential for the future of civilization.

Requirements for the degree of Bachelor of Arts in History are 33 semester hours in history. Requirements for the degree of Bachelor of Science in Education with a major in Social Science, concentrating on history, are a minimum of 27 semester hours in history within the 54 semester hours required for social science certification. The requirement for a minor in history is 15 semester hours of courses with an HIST prefix. For majors in

history programs, courses in history in Liberal Studies are applicable only if numbered 300 or higher. All programs should be planned with an advisor. Every major and concentrate in history will be advised by History Department faculty members.

Admission to HIST 482 and 483, initiation in the local chapters of Phi Alpha Theta and Pi Gamma Mu, participation in study tours and study abroad programs, and other activities should be investigated by every history student. The department is committed to the ideal of a broad liberal arts education.

Bachelor of Arts—History

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			50-52
Liberal Studies Electives: no courses with HIST prefix			
Humanities-History: Fulfilled by required courses in major			
College:			0-6
Foreign Language Intermediate Level (1)			
Major:			33
Required Courses:			
HIST 200	Introduction to History	3sh	
HIST 201	Western Civilization Before 1600	3sh (2)	
HIST 202	Western Civilization Since 1600	3sh (2)	
HIST 203	United States History for Historians	3sh (2)	
Controlled Electives:			
HIST 480	Senior Seminar (3)	3sh	
Non-Western HIST course: Latin America, Africa, or Asia		3sh	
Five additional history courses (4)		15sh	
Other Requirements:			0
Free Electives:			33-41
Total Degree Requirements:			124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) For students who have taken HIST 195, 210, 212, or 214 prior to becoming History majors, this course may not be appropriate. Consult History advisor before scheduling.
(3) This requirement may be fulfilled by completing either the departmental honors program or graduate seminar with a concluding paper.
(4) Courses selected from 300 and 400 level offerings; no more than 6sh from HIST 493 as major elective.

Bachelor of Arts—History/Pre-Law Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			50-52
Liberal Studies Electives: no courses with HIST prefix			
Humanities-History: Fulfilled by required courses in major			
College:			0-6
Foreign Language Intermediate Level (1)			
Major:			33
Required Courses:			
HIST 200	Introduction to History	3sh	
HIST 201	Western Civilization Before 1600	3sh (2)	
HIST 202	Western Civilization Since 1600	3sh (2)	
HIST 203	United States History for Historians	3sh (2)	
Controlled Electives:			
HIST 480	Senior Seminar (3)	3sh	
Non-Western HIST course: Latin America, Africa, or Asia		3sh	
Five additional history courses (4)		15sh	
Other Requirements: Pre-law interdisciplinary track			3-21
Seven courses, including at least one from each of six areas:			
Business: ACCT 201, ACCT 202, BLAW 235			
Criminology: CRIM 210, 260, 357			
Economics: ECON 121, 122, 332			
English: ENGL 212, 220, 310			
Philosophy: PHIL 101, 222, 450			
Political Science: PLSC 358, 359, 361			
Free Electives:			12-32
Total Degree Requirements:			124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) For students who have taken HIST 195, 210, 212, or 214 prior to becoming History majors, this course may not be appropriate. Consult History advisor before scheduling.
(3) This requirement may be fulfilled by completing either the departmental honors program or graduate seminar with a concluding paper.
(4) Courses selected from 300 and 400 level offerings; no more than 6sh from HIST 493 as major elective.

Bachelor of Science in Education—Social Science Education/History Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			50-52
Humanities-History: Fulfilled by required courses in major			
Social Science: ANTH 110, ECON 121, and PSYC 101			
Liberal Studies Electives: ECON 122, GEOG 230, and either SOC 337 or 362; no courses with HIST prefix			
College:			32
Professional Education Sequence: (1)			
COMM 103	Digital Instructional Technology	3sh	
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Programs	2sh	
EDSP 102	Educational Psychology	3sh	
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh	
EDUC 242	Pre-student Teaching Clinical Exp I	1sh	
EDUC 342	Pre-student Teaching Clinical Exp II	1sh	
EDUC 141	Student Teaching	12sh	
EDUC 442	School Law	1sh	
EDUC 455	Teaching of Social Science in Secondary Schools	3sh	
FDED 102	American Ed in Theory and Practice	3sh	
Major: (1) (2)			27
Required History Courses:			
HIST 200	Introduction to History	3sh	
HIST 201	Western Civilization Before 1600	3sh (3)	
HIST 202	Western Civilization Since 1600	3sh (3)	
HIST 203	United States History for Historians	3sh (3)	
HIST 480	Senior Seminar	3sh	
Controlled History Elective:			
One course from the fields of Middle East, Africa, Asia, or Latin America at the 300 level or higher		3sh	
History Electives:			
Three history courses at the 300 level or higher, one to be from United States history		9sh	
Required Social Science Distribution: (2)			9-12
GEOG XXX	200-level or higher Geography course	3sh	
PLSC 111	American Politics	3sh	
PLSC 280	Comparative Government I: Western Political Systems *or*	3sh	
PLSC 285	Comparative Government II: Non-Western Political Systems	3sh	
SOC 231	Contemporary Social Problems	3sh (4)	
Free Electives:			1-5
Total Degree Requirements:			124

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog. To be certified to teach History, Geography, Economics, Civics and Government, Social Science Education-History majors must apply for Citizenship Education certification.
(1) Students entering secondary social science education must present the following in order to gain admission:
(a) A 2.75 GPA with grades of C or better in history and social science courses required for certification.

(b) A letter of admission to teacher certification from the College of Education and Educational Technology; Acts 34 and 151 must be current at all times.

(2) Eligibility for student teaching and certification in secondary social science education (history concentration) requires a cumulative GPA of 2.75 and a grade of C or better in history courses and in the required social science distribution courses.

(3) For students who have taken HIST 195, 210, 212, or 214 prior to becoming History majors, this course may not be appropriate. Consult History advisor before scheduling.

(4) SOC 231 required only if SOC 337 or 362 are not taken as Liberal Studies electives.

Department of Journalism

Robert H. Russell, Chairperson; Ellerbach, Heilman, Jesick, Mukasa; and professors emeriti DeGeorge, Furgiuele, Truby

Website: *http://www.iup.edu/journalism*

Students interested in a career in news-editorial or public relations fields, with opportunities in such related areas as advertising, desktop publishing, computer-assisted reporting, and marketing, should enjoy this innovative, flexible program. The journalism major combines journalism elective courses, the student's choice of a variety of courses from other university departments, plus internships which provide on-the-job experience.

The IUP journalism major is flexible for the individual student, who decides, with an advisor, what directions his or her education will take for a mass communication career.

A student wishing to enter the program becomes a journalism major in the College of Humanities and Social Sciences. Then, the student chooses an individual program within a large group of elective journalism courses, plus a much larger group of courses from various other areas of the university. A student who completes the major graduates with a B.A. in Journalism. Because journalism itself covers all areas of life, the journalism major covers many areas of study preparation. There are only four required courses, so the student is free to mold the program to his/her own special interests through both major and free electives.

The journalism major will use journalism courses to fulfill the minimum of 30 hours required for the major. All journalism majors must complete the intermediate sequence of a foreign language. This may be done in one of three ways: by examination, by earning credit in third and fourth levels of a foreign language, or by completing four levels of a new language. If the last procedure is used, the two beginning foreign language courses may be applied as free electives to the total number of credits needed for graduation.

The Department of Journalism offers an 18-semester-hour minor designed to complement any major. Three 3-semester-hour courses are required: JRNL 105, 102, and 120. The remaining 9 semester hours may be taken from the following list of Journalism major courses: JRNL 326, 338, 344, 347, 375, and designated Special Topics courses. Internship semester hours do not apply toward the 18-semester-hour minor; however, a student in the minor program may take an internship and apply the semester hours as free electives.

Course Sequence

The journalism faculty offers the following operational policy for its course sequence and prerequisites. The basic idea is for students to take Level I courses prior to Level II courses, etc. We ask that special attention be given to course prerequisites to avoid scheduling students without proper experience into courses. We do retain flexibility of waiving sequence and prerequisites in individual cases.

Level I

JRNL 102	Basic Journalism Skills*
JRNL 105	Journalism and the Mass Media*
JRNL 120	Journalistic Writing**
JRNL 220	Writing for the Print Media*

* required for all journalism majors and minors
** for journalism minors and nonmajors

Level II

JRNL 243	History of American Press
JRNL 250	Women and the Press
JRNL 321	Feature Writing
JRNL 326	Public Relations I
JRNL 327	Layout, Design, and Production
JRNL 328	News Reporting (required for all journalism majors)
JRNL 337	Editing
JRNL 344	Issues and Problems
JRNL 345	Sports Journalism
JRNL 375	World News Coverage
JRNL 393	Document Design I

Level III

JRNL 347	Journalism Law
JRNL 348	The Editorial Page
JRNL 423	Management in Mass Communications
JRNL 427	Publications
JRNL 430	Public Opinion and the News Media
JRNL 446	Research Methods in Journalism
JRNL 450	Advertising Writing
JRNL 482	Independent Study
JRNL 490	Public Relations II
JRNL 491	Presentation Making
JRNL 492	Problem Solving in PR
JRNL 493	Internship
JRNL 494	Document Design II

Bachelor of Arts—Journalism

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **53-55**
Liberal Studies Electives: no courses with JRNL prefix

College: **0-6**
Foreign Language Intermediate Level (1)

Major: **30**
Required Courses:

JRNL 102	Basic Journalistic Skills	3sh
JRNL 105	Journalism and the Mass Media	3sh
JRNL 220	Writing for the Print Media	3sh
JRNL 328	News Reporting	3sh

Controlled Electives:
Other JRNL courses (as listed in this catalog) 18sh (2)

Other Requirements: **0**
Department recommends a planned program of dual major, minor(s), or electives. (3) (4)

Free Electives: **33-41**

Total Degree Requirements: **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Maximum of 6sh of internship applied to major.
(3) Students may take no more than 15sh outside the College of Humanities and Social Sciences without prior approval of advisor.
(4) Majors in the public relations sequence should make every effort to schedule BTST 321, MKTG 320, and MKTG 433.

Minor—Journalism **18 (1)**

Required Courses:

JRNL 102	Basic Journalistic Skills	3sh (2)
JRNL 105	Journalism and the Mass Media	3sh (2)
JRNL 120	Journalistic Writing	3sh (2)

Three controlled electives from following list: 9sh
JRNL 243, 326, 338, 344, 347, 375, 481 (3)

(1) Internship semester hours do not apply toward the 18sh minor: however, a student in the minor program may take an internship and apply the semester hours as free electives.
(2) The above three courses are to be taken in sequence.
(3) Minors may substitute only with departmental permission.

Department of Philosophy and Religious Studies

Albert E. Bonflard, Chairperson; Begres, Boone, Caraway, Chandler, Ferrara, Gibson, Holm, Liu, Mlecko, Montgomery, Rubenstein, Smith, Virenkyi; and professors emeriti Chan, Hermann, Schaub

Website: *http://www.iup.edu/philosophy*

Philosophy

The program in philosophy is designed to provide the student with a capacity for thinking clearly, a critical attitude, and the ability to reason theoretically.

Major

The major offers the background required for graduate work in philosophy. Those whose primary interests are in other disciplines will find philosophy courses which relate directly to their fields on a theoretical level. Both the minor and double major are especially desirable for their reflective benefits and because of the essentially interdisciplinary nature of philosophy.

Individually Designed Philosophy Minor

As a minor, philosophy has much to offer in helping individuals of various backgrounds better understand the fundamental assumptions of their disciplines. For that reason, the minor in philosophy will be individually designed to meet special career needs and personal interests. Selection of courses will be accomplished through discussions with and approval of the department advisor. Students must expect careful planning in any program approved. For further explanation and suggestions, see explanation under Philosophy Minor program requirements and consult department advisor.

Liberal Studies Offerings

The Philosophy program's Liberal Studies courses are all introductory in nature; none of them presupposes any philosophical background. The student may choose from the following: PHIL 101, 120, 221, 222, 223.

Pre-Law Track

The Department of Philosophy and Religious Studies participates in the University Pre-Law Track Program whereby a student majors in one of several academic disciplines including philosophy and also meets the pre-law track requirements. Students interested in the philosophy major/pre-law track should consult the departmental pre-law advisor. Philosophy courses included in the pre-law track program are as follows: PHIL 101, 222, and 450.

Bachelor of Arts—Philosophy

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **53-55**
Philosophy: included in major
Liberal Studies Electives: no courses with PHIL prefix

College: **0-6**
Foreign Language Intermediate Level (1)

Major: **30**
Required Courses:

PHIL 221	Symbolic Logic I	3sh
PHIL 222	Ethics	3sh

Controlled Electives: eight PHIL courses: 24sh
PHIL 324 or 325 and one other from list: (6sh)
- PHIL 324 History of Philosophy I
- PHIL 325 History of Philosophy II
- PHIL 326 Phenomenology and Existentialism
- PHIL 410 Contemporary Analytic Philosophy

PHIL 420 or 421 and one other from list: (6sh)
- PHIL 330 Philosophy of Science
- PHIL 420 Metaphysics
- PHIL 421 Theory of Knowledge
- PHIL 460 Philosophy of Language

Four other PHIL courses (12sh) (may be from the above lists) (with restrictions) (2) (3)

Other Requirements: **0**

Free Electives: **33-41**

Total Degree Requirements: **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) No more than four 100-200 level courses may be counted toward the major. Only PHIL courses may be counted toward the major. Unless otherwise indicated in the Course Descriptions, all 300-400 level courses require either philosophy major or minor status, junior or senior standing, or permission of the instructor.
(3) No more than 9 non-classwork semester hours may be counted toward the major. Non-classwork semester hours include independent study, independent honors project, and internship in philosophy.

Bachelor of Arts—Philosophy/Pre-Law Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **53-55**
Philosophy: included in major
Liberal Studies Electives: no courses with PHIL prefix

College: **0-6**
Foreign Language Intermediate Level (1)

Major: **30**
Required Courses:

PHIL 101	Informal Logic: Methods of Critical Thinking	3sh
PHIL 222	Ethics	3sh

Controlled Electives: 24sh
PHIL 324 or 325, and one other from list: (6sh)
- PHIL 324 History of Philosophy I
- PHIL 325 History of Philosophy II
- PHIL 326 Phenomenology and Existentialism
- PHIL 410 Contemporary Analytic Philosophy

PHIL 420 or 421, and one other from list: (6sh)
- PHIL 330 Philosophy of Science
- PHIL 420 Metaphysics
- PHIL 421 Theory of Knowledge
- PHIL 460 Philosophy of Language

Four other PHIL courses (12sh) (may be from the above lists) (with restrictions) (2) (3)

Other Requirements: Pre-law interdisciplinary track **15-21**
Seven courses, including at least one from each of six areas:
Business: ACCT 201, ACCT 202, BLAW 235
Criminology: CRIM 210, 260, 357
Economics: ECON 121, 122, 332
English: ENGL 212, 220, 310
History: HIST 320, 321, 346
Political Science: PLSC 358, 359, 361

Free Electives: **12-29**

Total Degree Requirements: **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) No more than four 100-200 level courses may be counted toward the major. Only PHIL courses may be counted toward the major. Unless otherwise indicated in the Course Descriptions, all 300-400 level courses require either philosophy major or minor status, junior or senior standing, or permission of the instructor.
(3) No more than 9 non-classwork semester hours may be counted toward the major. Non-classwork semester hours include independent study, independent honors project, and internship in philosophy.

Minor—Philosophy 15

Controlled Electives:
Five PHIL courses (with restrictions) (1) (2) 15sh

(1) No more than three 100-200 level courses may be counted toward the minor. Only PHIL courses may be counted toward the minor. Unless otherwise indicated in the Course Descriptions, all 300-400 level courses require either philosophy major or minor status, junior or senior standing, or permission of the instructor.
(2) No more than 3 non-classwork semester hours may be counted toward the minor. Non-classwork semester hours include independent study, independent honors project, and internship in philosophy.

Religious Studies

The program in Religious Studies is designed to provide a balanced, nonsectarian, cross-cultural approach leading to a better understanding of the phenomenon of religion in human experience. It emphasizes an interdisciplinary approach by a) requiring religion-related courses outside Religious Studies and by b) encouraging the minor or a double major, rather than a single major in Religious Studies.

The program is valuable for those planning careers in religious education, religious journalism, or religious broadcasting. The program also provides an excellent background for graduates planning to enter Catholic, Jewish, or Protestant seminaries. Religious Studies is also a good complement to majors in such fields as Anthropology, English, Fine Arts, History, International Studies, Music, Philosophy, Political Science, Psychology, and Sociology. Religious Studies is one significant way to integrate course studies within the university curriculum.

In addition to the 24 semester hours of Religious Studies courses in the major, 6 semester hours must be taken from a number of courses offered by other departments which complement those offered in Religious Studies. Opportunity for interdisciplinary and cross-cultural study is implicit in the study of religious themes and is required in the Religious Studies Program at IUP. Revisions are pending in the Religious Studies program.

Minor

The requirements for a Minor in Religious Studies are 15sh:

1. 12sh must be taken from the Religious Studies offerings, which include certain required courses (see below).
2. 3sh must be taken outside the Religious Studies offering but in "religion-related" courses.
3. No more than 3 non-classwork semester hours may count toward minor.

Consult advisor in Religious Studies for choices.

Liberal Studies Offerings

The Religious Studies program's Liberal Studies courses are all introductory in nature; none presupposes any Religious Studies background. The student may choose from the following: RLST 100, 250, or 290.

Bachelor of Arts—Religious Studies

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
Liberal Studies Electives: no courses with RLST prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 30
Controlled Electives: (2)

One course from list A: RLST 100 or 110	3sh
One course from list B: RLST 210 or 250	3sh
One course from list C: RLST 370 or 375	3sh
One course from list D: RLST 380, 410, or 440	3sh
Four additional RLST courses (3)	12sh
Two courses from religion-related courses (3)	6sh

Other Requirements: 0

Free Electives: 33-41

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in the Liberal Studies electives.
(2) Other courses may be approved in consultation with advisor.
(3) Consult Religious Studies advisor.

Minor—Religious Studies 15

RLST 100 or 110	3sh
RLST 370 or 375	3sh
RLST 380 or 410 or 440	3sh
Elective in Religious Studies (1)	3sh
Religion-related course (1)	3sh

(1) Consult Religious Studies advisor.

Department of Political Science

David D. Chambers, Acting Chairperson; Bahgat, Dejene, Jackson, Kuffner-Hirt, Lynch, Sitton, Torges; and professors emeriti Chaszar, Morris, Palmer, Platt, Smith

Website: *http://www.iup.edu/politicalscience*

Political scientists focus upon political systems, including the effect of environment on the system, inputs, the decision-making agencies which render binding public policies, and system outputs. Approaches to the study of government and politics include the normative approach, in which philosophical attention centers on values by asking the question "What ought to be?" and the behavioral approach, in which an attempt is made to develop verifiable theories through scientific methods by asking the questions "How?" and "Why?"

Students majoring in political science have employment opportunities in federal, state, and local governments and with private civic groups, interest groups, and political groups. Students who go on to graduate work find appointments at higher levels and in college teaching. Students graduating in political science, as in any of the social sciences, are in demand by employers in business and industry. Students completing the Political Science Internship Program have experienced considerable success in finding employment upon graduation. The political science major is also especially suitable for the pre-law student.

Degrees offered by the Political Science Department are the Bachelor of Arts in Political Science, in Government and Public Service, and in Political Science Pre-Law track. An interdisciplinary major and a minor in International Studies are sponsored by the Political Science Department. The department also offers a minor in political science.

Bachelor of Arts—Political Science

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
Social Science: PLSC 111
Liberal Studies Electives: no courses with PLSC prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 33
Required Courses:

PLSC 101	World Politics	3sh (2)
PLSC 111	American Politics	*sh (3)

Controlled Electives: 30sh
At least one course in three of first four areas:
American Studies: PLSC 251, 300, 346, 350, 351, 353, 354, 355, 356, 357, 358, 359
Political Theory: PLSC 360, 361, 362
Public Policy and Administration: PLSC 250, 370, 371, 444
International Studies: PLSC 280, 282, 283, 285, 320, 321, 380, 382, 383, 384, 385, 386, 387, 388, 389 (4)
General Political Science: PLSC 300 (strongly recommended), PLSC 377, 480, 481, 482, 485, 493

Other Requirements: Second major, minor, or concentration as approved by advisor with maximum of 15sh outside College of Humanities and Social Sciences unless specifically approved	15-27
Free Electives:	3-23
Total Degree Requirements:	124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) PLSC 101 satisfies non-Western requirement.
(3) Semester hours for PLSC 111 are counted in the Liberal Studies Social Science requirements.
(4) PLSC 280 and/or 285 recommended as prerequisite to PLSC 380 through 389.

Bachelor of Arts—Political Science/Pre-Law Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **53-55**
Social Science: PLSC 111
Liberal Studies Electives: no courses with PLSC prefix

College: **0-6**
Foreign Language Intermediate Level (1)

Major: **33**
Required Courses:

PLSC 101	World Politics	3sh (2)
PLSC 111	American Politics	*sh (3)

Controlled Electives: 30sh
At least one course in three of first four areas:
American Studies: PLSC 251, 300, 346, 350, 351, 353, 354, 355, 356, 357, 358, 359
Political Theory: PLSC 360, 361, 362
Public Policy and Administration: PLSC 250, 370, 371, 444
International Studies: PLSC 280, 282, 283, 285, 320, 321, 380, 382, 383, 384, 385, 386, 387, 388, 389 (4)
General Political Science: PLSC 300 (strongly recommended), PLSC 377, 480, 481, 482, 485, 493

Other Requirements: Pre-law interdisciplinary track Seven courses, including at least one from each of six areas: Business: ACCT 201, ACCT 202, BLAW 235 Criminology: CRIM 210, 260, 357 Economics: ECON 121, 122, 332 English: ENGL 212, 220, 310 History: HIST 320, 321, 346 Philosophy: PHIL 101, 222, 450	15-21
Free Electives:	12-26
Total Degree Requirements:	124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) PLSC 101 satisfies non-Western requirement.
(3) Semester hours for PLSC 111 are counted in the Liberal Studies Social Science requirements.
(4) PLSC 280 and/or 285 recommended as prerequisite to PLSC 380 through 389.

Bachelor of Arts—Government and Public Service

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **53-55**
Mathematics: MATH 217
Social Science: ECON 121, PSYC 101, SOC 151
Liberal Studies Electives: CO101, no courses with PLSC prefix

College: **0-6**
Foreign Language Intermediate Level (1)

Major: **39**
Required Courses:

ECON 335	Public Finance	3sh (2)
ECON 336	State and Local Finance	3sh (2)
PLSC 111	American Politics	3sh
PLSC 250	Public Policy	3sh
PLSC 251	State and Local Political Systems	3sh
PLSC 300	Research Methods in Political Science	3sh
PLSC 370	Introduction to Public Administration	3sh
PLSC 371	Issues in Public Administration	3sh
PSYC 330	Social Psychology	3sh
SOC 458	Political Sociology	3sh (3)

Controlled Electives: 9sh
Three courses from list: PLSC 350, 351, 352, 353, 354, 355, 358, 377, 444, 481, 482, 485, 493

Other Requirements:	21
One course from communications areas (English, Journalism, Communications Media) as approved by advisor	3sh
Interdisciplinary minor: Government Management, Personnel Administration, Financial Administration, Planning	18sh
Free Electives:	3-11
Total Degree Requirements:	124

(1) Intermediate-level Foreign Language may be included in the Liberal Studies electives.
(2) Approved substitutes for ECON 335 and 336: ECON 283, 332, 333, 373.
(3) Approved substitutes for SOC 458: SOC 303, 335, 345.

Bachelor of Arts—International Studies/Political Science

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **53-55**
Social Science: PLSC 111
Liberal Studies Electives: no courses with PLSC prefix

College: **0-6**
Foreign Language Intermediate Level (1)

Major: **33**
Required Courses:

PLSC 101	World Politics	3sh
PLSC 111	American Politics	*sh (2)
Interdisciplinary sequence		15sh (3)
Cultural specialization sequence		15sh (4)

Other Requirements:	0 (5)
Free Electives:	30-38
Total Degree Requirements:	124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives. Only courses 300 level and beyond may count in the cultural specialization sequence.
(2) Semester hours for PLSC 111 are counted in the Liberal Studies Social Science requirements.
(3) The interdisciplinary sequence includes an introductory or comparative international course from each of five social science disciplines: anthropology, economics, geography, history, political science, and sociology. Selection depends on goal(s) of major and should be planned in consultation with the International Studies advisor.
(4) The specialization sequence focuses on one area or culture and three disciplines: economic systems, political systems, language, literature, history, geography. Currently, three specializations are offered: Latin America, the Far East, and Soviet Studies. Consult with advisor for planning course selection.
(5) Majors are strongly encouraged to take advantage of the study abroad opportunities available through IUP department programs and exchange opportunities available through the Center for International Studies.

Minor—Political Science 15

Required Courses:

PLSC 101	World Politics	3sh
PLSC 111	American Politics	3sh

Controlled Electives:

Three additional PLSC courses 9sh

Minor—International Studies 18

Required Courses:

PLSC 101	World Politics	3sh
PLSC 111	American Politics	*sh (1)

Controlled Electives:

Interdisciplinary sequence (see major) 15sh

(1) Semester hours counted with Liberal Studies Social Sciences.

Department of Sociology

Harvey S. Holtz, Chairperson; Ackerman, Chang, Darling, Gondolf, Grant, Heasley, Heckert, Hunter, Kanazawa, Nowak, Sandersun, Schneider, Snyder

Website: *http://www.iup.edu/sociology*

The Department of Sociology seeks to develop both the scientific and humanistic foundations of sociology, to educate the wider community as to the significance of sociological knowledge, to apply sociological knowledge to current social problems, and to advance the profession by promoting the welfare of individuals and society. The discipline of sociology focuses primarily on the analysis of modern industrial societies by examining their basic patterns of social organization, the various changes that occur within these patterns, and the impact of the patterns on individual thought and action. Students are prepared for employment in human service fields or for graduate study in sociology or related fields.

Students majoring in sociology may select one of three tracks: General Sociology, Human Services, and Applied Social Research. The general track attempts to broadly educate those students who may wish to pursue graduate training in sociology and make sociology a career and profession. Because of its flexibility, it is also appropriate for students who want to pursue double majors that would include such fields as psychology or criminology. The general track gives students the broadest possible training in sociology. Students graduating with majors in general sociology often find employment in business, industry, and government.

The Human Services track in sociology seeks to help students understand the causes of many of the problems that plague modern societies, such as poverty, racial discrimination, substance abuse, and domestic violence. It is designed to provide students with the knowledge and skills necessary to become practitioners in various human services areas (e.g., juvenile delinquency, medical sociology, gerontology, and interpersonal dynamics and family sociology).

The Applied Social Research track emphasizes the development of research and assessment skills in students. Such skills are important in carrying out program assessments, needs assessments, program development, and other activities that focus on gathering, analyzing, and interpreting data important for policymakers.

The department also prepares teachers for secondary school social studies with a concentration in sociology. The program leads to the degree Bachelor of Science in Education. With its emphasis on patterns of social organization in modern industrialized societies, sociology provides a solid foundation for teaching social science at the secondary level. Minors are available in sociology and in applied social research.

Bachelor of Arts—Sociology/General Sociology Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55

Mathematics: MATH 217 recommended
Social Science: SOC 151
Liberal Studies Electives: no courses with SOC prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 30

Required Courses:

SOC 151	Principles of Sociology	*sh (2)
SOC 320	Sociological Theory	3sh
SOC 380	Social Research Methods	3sh

One of the following courses: 3sh

SOC 361	Social Stratification
SOC 362	Racial and Ethnic Minorities
SOC 363	Sociology of Gender

At least one *different* course from four of the following substantive areas: 12sh

Social Inequality and Social Change:
SOC 303, 337, 361, 362, 363, 448, 458
Deviance and Social Problems:
SOC 231, 333, 335, 427, 428, 452
Individual and Society: SOC 251, 345, 357
Social Organization and Institutions: SOC 286, 336, 339, 340, 341, 342, 348, 352, 421, 458
Comparative Sociology: SOC 233, 271, 272, 273, 286, 303, 314, 337, 342

Free Sociology Electives: (3) 9sh

Other Requirements: 0

Free Electives: 33-41

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Semester hours counted in Liberal Studies, not in the major.
(3) Internships in Sociology (SOC 493) will not count as part of the required Free Sociology electives and must count as credits beyond the 30sh required for the major (out of Free Electives). The student must write a one-page justification explaining the selection of his/her 9sh of Free Sociology electives as it relates to the internship experience.

Bachelor of Arts—Sociology/Human Services Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55

Mathematics: MATH 217 recommended
Social Science: SOC 151 required, ANTH 110 and PSYC 101 recommended
Liberal Studies Electives: no courses with SOC prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 42

Required Courses:

SOC 151	Principles of Sociology	*sh (2)
SOC 301	Foundations of Sociological Practice	3sh
SOC 302	Clinical Sociological Practice	3sh
SOC 303	Social and Cultural Change	3sh
SOC 320	Sociological Theory	3sh
SOC 380	Social Research Methods	3sh
SOC 493	Internship in Sociology (3)	12sh

Controlled Electives: One substantive area (4) 15sh (5)

Medical Sociology: ANTH 444 or SOC 342, and four courses from list: ANTH 222, 444, BIOL 151 or 155, ECON 335, FDNT 212, PSYC 321, 378, RGPL 350, SOC 231, SOC 336, 342, 357, 448, 457
Gerontology: PSYC 378 or SOC 357, and four courses from list: ANTH 444, ECON 335, PSYC 312, 378, RGPL 350, SOC 231, 251, 336, 342, 352, 357, SOC 448, 457
Juvenile Delinquency: CRIM 451 or SOC 333, and four courses from list: CRIM 102, 270, 361, 370, 451, GEOG 432, HIST 374, SOC 231, 333, 335, 336, SOC 345, 361, 362, 428, 448, 457
Interpersonal and Family Sociology: SOC 336 or 345, and four courses from list: HMEC 218, 224, PSYC 311, 321, 330, SOC 251, 335, 336, 345, SOC 361, 363, 427, 428, 448, 452, 457

Labor and Industry: SOC 340 or 348, and four courses from list: ECON 330, 350, 371, 372, 373, HIST 373, ILR 426, 480, PSYC 390, SOC 231, 340, 348, 361, 448, 457, 458
Community Development: SOC 231 and PLSC 354, and Three courses from list: ANTH 271, 272, 314, ECON 336, 383, FDNT 402, GEOG 331, 332, PLSC 251, RGPL 350, SOC 333, 336, 341, SOC 363, 448, 457

Other Requirements: 0

Free Electives: 21-29

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Semester hours counted in Liberal Studies, not in the major.
(3) SOC 301 and 302 must be taken before SOC 493. Generally, SOC 493 is taken in the summer before the senior year.
(4) Students may create their own substantive area with the approval of the department chairperson.
(5) At least three courses in any substantive area must be SOC (Sociology) courses.

Bachelor of Arts—Sociology/Applied Social Research Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
Mathematics: MATH 217
Social Science: SOC 151 required, ANTH 110 recommended
Liberal Studies Electives: CO101, no courses with SOC prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 42
Required Courses:

SOC 151	Principles of Sociology	*sh (2)
SOC 320	Sociological Theory	3sh
SOC 380	Social Research Methods	3sh
SOC 456	Field Research Methods	3sh
SOC 457	Computer Use in Sociology	3sh
SOC 458	Political Sociology	3sh
SOC 493	Internship in Sociology (3)	12sh

Controlled Electives: One substantive area (4) 15sh (5)
Medical Sociology: ANTH 444 or SOC 342, and four courses from list: ANTH 222, 444, BIOL 151 or 155, ECON 335, FDNT 212, PSYC 321, 378, RGPL 350, SOC 231, 335, 336, 342, 448, 452
Gerontology: PSYC 378 or SOC 357, and four courses from list: ANTH 444, ECON 335, 360, PSYC 312, 378, RGPL 350, SOC 231, 251, 336, 342, 352, 357, 448
Juvenile Delinquency: CRIM 451 or SOC 333, and Four courses from list: CRIM 102, 270, 361, 370, 451, GEOG 432, HIST 374, SOC 231, 333, 335, 336, SOC 345, 361, 362, 428
Interpersonal and Family Sociology: SOC 336 or 345, and four courses from list: HMEC 218, 224, PSYC 311, 321, 330, SOC 251, 335, 336, SOC 345, 361, 363, 427, 428, 448, 452
Labor and Industry: SOC 340 or 348, and four courses from list: ECON 330, 350, 371, 372, 373, HIST 373, ILR 426, 480, PSYC 390, SOC 231, 303, 340, 348, 361, 448, 458
Community Development: SOC 231 and PLSC 354, and three courses from list: ANTH 271, 272, 314, ECON 336, 383, FDNT 402, GEOG 331, 332, PLSC 251, RGPL 350, SOC 333, 336, 341, 363, 448

Other Requirements: 0

Free Electives: 21-29

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies elective.
(2) Semester hours counted in Liberal Studies, not in the major.
(3) SOC 380, 456, and 457 must be taken before taking SOC 493 Generally, SOC 493 is taken in the summer before the senior year.
(4) Students may create their own substantive area with the approval of the department chairperson.
(5) At least three courses in any substantive area must be SOC (Sociology) courses.

Bachelor of Science in Education—Social Sciences Education/Sociology Concentration (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
Social Science: PSYC 101, SOC 151, ECON 121
Liberal Studies Electives: ECON 122, GEOG 230, PLSC 346, no courses with SOC prefix

College: 42
Professional Education Sequence:

COMM 103	Digital Instructional Technology	3sh
EDUC 242	Pre-student Teaching Clinical Exp I	1sh
EDUC 342	Pre-student Teaching Clinical Exp II	1sh
EDUC 441	Student Teaching	12sh
EDUC 442	School Law	1sh
EDUC 455	Teaching of Social Science in Secondary Schools	3sh
EDSP 102	Educational Psychology	3sh
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2sh
FDED 102	American Ed in Theory and Practice	3sh

Major: 36
Required Sociology or Related Courses:

ANTH 211	Cultural Anthropology	3sh
SOC 151	Principles of Sociology	*sh (1)
SOC 231	Contemporary Social Problems	3sh
SOC 320	Sociological Theory	3sh
SOC 380	Social Research Methods	3sh

Controlled Electives:
One course recommended from each of the following 9sh
Three areas of Sociology:
Social Structures and Processes: SOC 336, 340, 341, 348, 352, 421, 458
Social Problems: SOC 231, 251, 333, 335, 357, 362, 363, 427, 428
Theory and Research: ANTH 317, SOC 301, 456, 457
History Distributional Requirements:
Any two History courses which focus on the U.S. 6sh
Any Non-Western or World History Course 3sh
Required Social Science Distribution:
GEOG 200 level or higher 3sh
PLSC 280 or 285 3sh

Other Requirements: 0

Free Electives: 1-3

Total Degree Requirements: 124

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(1) SOC 151 is counted as part of the 53-55sh Liberal Studies requirements.

Minor—Sociology 15

Required course:

SOC 151	Principles of Sociology	3sh

Controlled Electives:
One course from list: SOC 231, 320, 380 3sh
Three additional courses in Sociology 9sh

Minor—Applied Social Research **15-21**

Required Courses:

SOC 380	Social Research Methods	3sh
SOC 456	Field Research Methods	3sh
SOC 457	Computer Use in Sociology	3sh
SOC 458	Political Sociology	3sh

Controlled Elective:

Any research course in College of Humanities and Social Sciences, as approved by department chair	3sh
Optional internship: ANTH 493 or SOC 493	6sh

Department of Spanish and Classical Languages

R. Roger Smith, Chairperson; Barton, Broad, Carranza, Delbrugge, Drescher, Foltz, Glisan, Hernandez, Jurewicz, Miltz, Rodríguez, M. Ryan, Spieker, Thornton, Young; and professor emeritus Mendizabel

Website: *http://www.iup.edu/spanish*

The Department of Spanish and Classical Languages offers a varied curriculum designed to provide not only basic language instruction in Spanish, Greek, and Latin but also the more advanced competencies needed by language specialists and students hoping to take advantage of an international study experience. For the undergraduate Spanish major, the department has three degree programs: the B.S. in Education, the B.A. in Spanish, and the B.A. in Spanish for International Trade. The latter degree program provides solid undergraduate degree training preparatory to an M.B.A. in International Management.

Students majoring in Spanish will acquire proficiency in all phases of the language and enter more deeply into the history, culture, and literature of Spanish-speaking countries. Spanish majors generally find employment in government work, librarianship, journalism, foreign trade, airlines, tourism, business, criminology, and teaching. Students choosing careers as secondary school teachers will find the close supervision and advanced methodology offered by the department a distinct asset.

College Language Requirements

Students in the College of Natural Sciences and Mathematics and College of Humanities and Social Sciences, who must pass an intermediate-level language course requirement for graduation, may choose any one of the five languages offered by the Foreign Language departments: French, German, Italian, Latin, and Spanish. Those choosing the Spanish or Latin options will fulfill the requirement by successfully completing SPAN 201 or 211* or LATN 201. The student with no previous foreign language study will take SPAN 101-102 or SPAN 111* or LATN 101-102 as a prerequisite; the semester hours will not be applicable to any college or department requirements (except for students in HRIM who may fulfill their 3-9-semester hour language requirement with SPAN 111* or 211* or SPAN 131-132 or with two 4-semester hour courses) but may be counted as general electives in the total required for graduation. Students in the other colleges may choose to take one of the languages offered (at the intermediate level) in fulfilling the requirements of Liberal Studies electives.

*Course is currently inactive.

Students with previous Spanish study in high school will be placed into the appropriate course levels by means of a written departmental exam, administered prior to the beginning of the semester. In addition, as deemed necessary, especially in the case of native or heritage speakers, students' writing and speaking proficiency will be assessed by one or more faculty members in the Spanish department. Each student's individual requirements and the judgment of the classroom instructors will also be considered in placement.

Spanish for Elementary Education

A student in Elementary Education may elect a concentration of 19 semester hours of Spanish, consisting of the following:

SPAN 201 or equivalent	4sh
SPAN 221 Intermediate Spanish Conversation	3sh
SPAN 230 Intermediate Spanish Composition	3sh
SPAN 260 Introduction to Hispanic Literature	3sh
SPAN 321 Advanced Spanish Conversation	3sh
SPAN 404 Advanced Spanish Grammar	3sh

Elementary Education students wishing to prepare to teach in elementary programs where content teaching in Spanish is the objective should enroll in the Foreign Languages and International Studies for Elementary Teaching (FLISET) program described under the Department of Professional Studies in Education.

Study Abroad and Internships

Study Abroad: The university has established study-abroad centers in Spain, Mexico, and Costa Rica. The program in Valladolid, Spain, is a second-semester-only program, whereas the ones in Mexico and Costa Rica are summer programs. All majors are required to participate in study abroad; nonmajors are also accepted into these programs. The 18 semester hours in Spain, 7 semester hours in Mexico, or 4 semester hours in Costa Rica are applicable to a major or a minor in Spanish. Students interested in more information should contact the Spanish and Classical Languages Department.

Internships: Internships in Spain, Mexico, and Costa Rica are available through the department. All internships take place during the summer and vary from six weeks to two months in duration. Internship is a credit-bearing course, SPAN 493, and all interns are enrolled in the first session of summer school. Noncredit internships cannot be considered. Students enrolled in the Spanish for International Trade program are strongly urged to do an internship in order to gain credibility in the field of international business. Internships are available in banking, government, social work, communications, education, marketing, and many other fields. Arranging an internship abroad takes considerable long-range planning, and anyone interested should contact the Department of Spanish and Classical Languages at least three months in advance.

Bachelor of Arts—Spanish

Liberal Studies: As outlined in the Liberal Studies section with the following specifications: **53-55**
Liberal Studies Electives: no courses with SPAN prefix

College:

Foreign Language (included in major)	0

Major: **37**
Study Abroad (1)
Required Courses:

SPAN 201	or equivalent	4sh
SPAN 221	Intermediate Spanish Conversation	3sh
SPAN 230	Intermediate Spanish Composition	3sh
SPAN 260	Introduction to Hispanic Literature	3sh
SPAN 321	Advanced Spanish Conversation	3sh
SPAN 340	Hispanic Civilization Through the 19th Century	3sh
SPAN 342/344	20th-Century Spanish Civilization and Culture/20th-Century Spanish-American Civilization and Culture	3sh
SPAN 404	Advanced Spanish Grammar	3sh

Controlled Electives:

At least two SPAN courses from those numbered 410-431	6sh
Any other 6sh in SPAN courses 342 or above	6sh

Other Requirements:	**0**
Free Electives:	**32-34**
Total Degree Requirements:	**124**

(1) Students in the B.A. Spanish major must successfully complete a program of language study in a Spanish-speaking country. This program must, as a minimum, last four weeks and carry 3 or more sh extending beyond the intermediate level. Students may fulfill this requirement by participating in any of IUP's study abroad programs in Spain, Mexico,

or Costa Rica, or by transferring credits from another accredited program. Students wishing to fulfill this requirement through a non-IUP program should obtain prior approval from the department. Based on demonstration of adequate oral proficiency and significant cross-cultural experience, students may be exempted from this requirement with the approval of the advisor.

Bachelor of Arts—Spanish for International Trade

Liberal Studies: As outlined in Liberal Studies section with following specifications: 54-56
Mathematics: MATH 121
Social Science: ECON 121
Liberal Studies Electives: GEOG 252, MATH 214, COSC/BTED/IFMG 101, no course with SPAN prefix

College: 0
Foreign Language (included in major)

Major: 34
Study Abroad (1)
Required Courses:

SPAN 201	or equivalent	4sh
SPAN 222	Intermediate Span Conversation-Business	3sh
SPAN 230	Intermediate Spanish Composition	3sh
SPAN 260	Introduction to Hispanic Literature	3sh
SPAN 321	Advanced Spanish Conversation	3sh
SPAN 340	Hispanic Civilization Through the 19th Century	3sh
SPAN 342/344	20th-Century Spanish Civilization and Culture/20th-Century Spanish-American Civilization and Culture	3sh
SPAN 354	Commercial Spanish	3sh
SPAN 404	Advanced Spanish Grammar	3sh

Controlled Electives:
Other Spanish Electives 6sh

Other Requirements: Business Sequence 36

ACCT 201	Accounting Principles I	3sh
ACCT 202	Accounting Principles II	3sh
BLAW 235	Legal Environment of Business	3sh
BTST 321	Business and Interpersonal Comm	3sh
ECON 122	Principles of Economics II	3sh
FIN 310	Finance I	3sh
IFMG 300	Information Systems: Theory and Practice	3sh
MGMT 311	Human Behavior in Organizations	3sh
MGMT 330	Production and Operations Mgmt	3sh
MGMT 495	Business Policy	3sh
MKTG 320	Principles of Marketing	3sh
QBUS 215	Business Statistics	3sh

Free Electives: 0

Total Degree Requirements 124-126

(1) Students in the B.A. Spanish for International Trade major must successfully complete a program of language study in a Spanish-speaking country. This program must, as a minimum, last four weeks and carry 3 or more sh extending beyond the intermediate level. Students may fulfill this requirement by participating in any of IUP's study abroad programs in Spain, Mexico, or Costa Rica or by transferring credits from another accredited program. Students wishing to fulfill this requirement through a non-IUP program should obtain prior approval from the department. Based on demonstration of adequate oral proficiency and significant cross-cultural experience, students may be exempted from this requirement with the approval of the advisor.

B.S.Ed.–Secondary Spanish Education

The following additional requirements for Spanish Education in the Admission to Teacher Education and Certification Process are required. Please see the remainder of the requirements for all B.S.Ed. majors in the Admission to Teacher Education and Certification Process in the College of Education and Educational Technology section of this catalog.

Junior Standing:

Effective with the entering class of 1990, junior standing is reviewed in the semester that the 57th semester hour is earned. At that point, students need to meet the following departmental requirements in addition to the universitywide 3-Step requirements.

1. Successfully complete an English essay. Students read a recent article dealing with innovations in teaching and are asked to respond to certain issues
2. Pass a standard exam in grammar, reading, and writing
3. Attain intermediate-mid rating or higher in an Individual Oral Proficiency Interview (ACTFL-ETS)
4. Satisfactorily complete an interview in English with the Department of Spanish and Classical Languages faculty and one cooperating teacher to assess the student's ability to interact with others on a professional level
5. Hold at least a 3.0 GPA in Spanish

Admission to Student Teaching:

1. Attain advanced rating or higher on the Individual Oral Proficiency Interview (ACTFL-ETS).
2. Hold at least a 3.0 GPA in Spanish
3. Earn a grade of C or higher in EDUC 453
4. Earn a grade of C or higher in SPAN 353

Bachelor of Science in Education—Secondary Spanish Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
Social Science: ANTH 110, PSYC 101
Liberal Studies Electives: no courses with SPAN prefix

College: 34
Professional Education Sequence:

COMM 103	Digital Instructional Technology	3sh
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2sh
EDSP 102	Educational Psychology	3sh
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh
EDUC 242	Pre-Student Teaching and Clinical Exp I	1sh
EDUC 342	Pre-Student Teaching and Clinical Exp II	1sh
EDUC 441	Student Teaching	12sh
EDUC 442	School Law	1sh
EDUC 453	Teaching of Foreign Language in Secondary School	3sh
EDUC 499	Multicultural/Multiethnic Education	2sh
FDED 102	American Ed in Theory and Practice	3sh

Major: 34
Study Abroad (1)
Required Courses:

SPAN 201	or equivalent	4sh
SPAN 221	Intermediate Spanish Conversation	3sh
SPAN 230	Intermediate Spanish Composition	3sh
SPAN 260	Introduction to Hispanic Literature	3sh
SPAN 321	Advanced Spanish Conversation	3sh
SPAN 340	Hispanic Civilization Through the 19th Century	3sh
SPAN 342/344	20th-Century Spanish Civilization and Culture/20th-Century Spanish-American Civilization and Culture	3sh
SPAN 353	Spanish Phonetics and Phonemics	3sh
SPAN 390	Teaching of Elementary Content Through the Spanish Language	3sh
SPAN 404	Advanced Spanish Grammar	3sh

Controlled Electives:
Any other 3sh from SPAN 300 or above 3sh

Free Electives: 1-3

Total Degree Requirements 124

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.

(1) Students in the B.S.Ed. Secondary Spanish Education major must successfully complete a program of language study in a Spanish-speaking country. This program must, as a minimum, last four weeks and carry 3 or more sh extending beyond the intermediate level. Students may fulfill this requirement by participating in any of IUP's study abroad programs in Spain, Mexico, or Costa Rica, or by transferring credits from another accredited program. Students wishing to fulfill this requirement through a non-IUP program should obtain prior approval from the department. Based on demonstration of adequate oral proficiency and significant cross-cultural experience, students may be exempted from this requirement with the approval of the advisor.

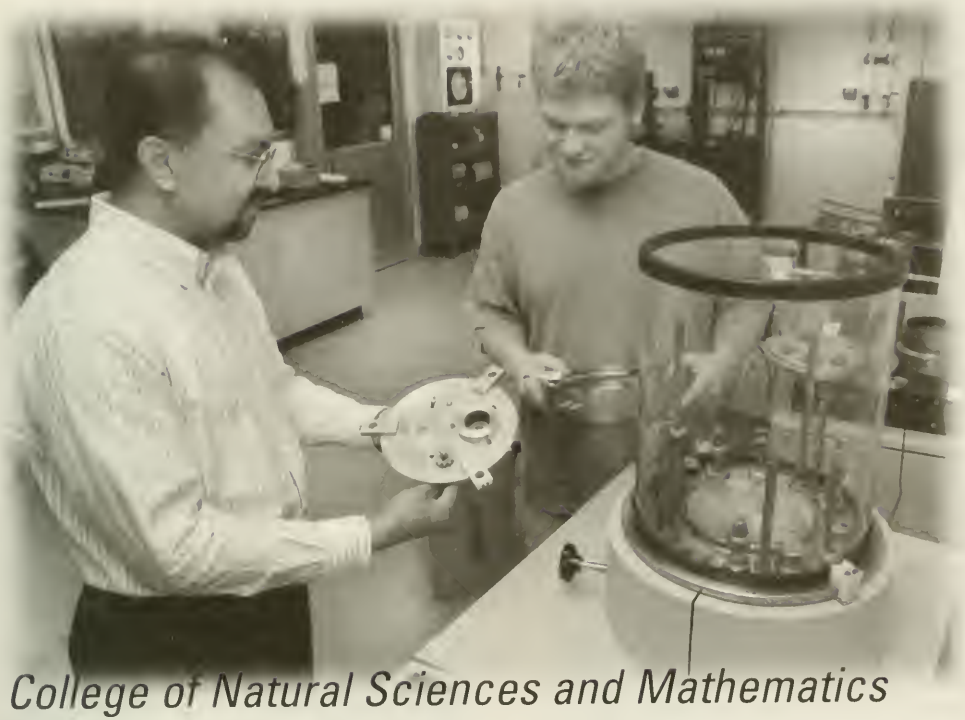
Minor—Spanish 22

Required Courses:

SPAN 201	or equivalent	4sh
SPAN 221	Intermediate Spanish Conversation	3sh
SPAN 230	Intermediate Spanish Composition	3sh
SPAN 260	Introduction to Hispanic Literature	3sh
SPAN 321	Advanced Spanish Conversation	3sh
SPAN 342/344	20th-Century Spanish Civilization and Culture/20th-Century Spanish-American Civilization and Culture	3sh

Controlled Electives:

One course: SPAN 340, 342, 344, 362, 364, 353 3sh



College of Natural Sciences and Mathematics

John S. Eck, Dean
Aleksandra B. Kaniasty, Assistant Dean
Jacqueline L. Gorman, Dean's Associate
Website: *http://www.iup.edu/natsciandmath*

One of the characteristics of the twentieth century is the marked change in the relation of citizens to their environment. Space probes, orbiting satellites, and productive research on the structure and synthesis of living matter have brought to the forefront for reexamination such time-honored queries as, "What is the nature of the universe?" or "Can people control their natural environment?" or "How did life begin?" Scientifically found answers to these and other questions, coupled with proper application of this knowledge for humankind's betterment, must be a significant part of the goal of educated people everywhere.

The objectives of the College of Natural Sciences and Mathematics are to acquaint the student with the kinds of problems which lend themselves to possible solutions through the use of science; to introduce different scientific techniques through significant illustrative experiences; to give a sense of perspective in the development of science; and to develop an understanding of the basic community of all scientific disciplines.

Degrees Offered

Applied Mathematics
Applied Physics
Biochemistry
Biology
Biology Education
Chemistry
Chemistry Education
Computer Science
Earth and Space Science Education
Economics/Mathematics
Electro-Optics (Associate in Applied Science and Associate in Science)
Environmental Geoscience
Environmental Health
General Science Education
Geology
Mathematics
Mathematics Education
Natural Science
Physics
Physics Education
Psychology

Degrees

The departments of Biology, Chemistry, Computer Science, and Physics offer work leading to either a Bachelor of Science or a Bachelor of Arts degree, depending upon the specific course program pursued. The Bachelor of Science degree is awarded for successful work in the departments of Geoscience and Mathematics. The Bachelor of Arts degree is awarded by the Department of Psychology. A Bachelor of Science degree is also awarded in Natural Sciences. An Associate of Applied Science and an Associate in Science are awarded in Electro-Optics.

Several departments in the college sponsor Master of Arts or Master of Science degrees in the university's Graduate School. The Department of Psychology offers the Doctor of Clinical Psychology degree. Information on these programs should be obtained from the Graduate School.

Degree Requirements

In addition to the university's Liberal Studies requirements, all students seeking a baccalaureate degree in the College of Natural Sciences and Mathematics must complete the requirements for a major as established by the department through which they wish to specialize. Statements of these

requirements and those for minoring in a specific field appear in the department sections that follow. A double major or minor may encompass a discipline outside as well as within the college but should be selected only with advisor approval. As a general principle, there is considerable latitude in course choice for Natural Sciences and Mathematics majors; for specifically required courses, substitution in any program must have the written approval of the student's department chairperson or the college dean.

The Foreign Language Requirement

Unless otherwise indicated, each department adheres to the following foreign language requirement:

A candidate for a Bachelor of Arts or Bachelor of Science degree must demonstrate a proficiency in a foreign language equivalent to that attained upon completion of two years of college instruction in that language. This requirement may be met by one of the following:

a. successful completion of the intermediate level in a specific language
b. successful completion of an exemption or credit examination

Any foreign student, registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, is exempt from the foreign language requirement for a Natural Sciences and Mathematics degree if the department he/she is majoring in does not require a specific language not thus covered.

Preprofessional Programs

The college offers programs for the preparation of students for acceptance by a professional school: pre-medical (including osteopathic medicine) and pre-veterinary medicine. In addition, the college offers a major in the Natural Sciences for those students whose goal is dentistry, pharmacy or pharmacology, optometry, podiatry, chiropractic medicine, or physical therapy. All programs are so designed that, should work at a professional school not ensue, the student may earn an IUP baccalaureate degree, provided he/she has been faithful to faculty advisement.

The preprofessional health programs in the college presuppose that the student has an excellent background in the high school sciences and mathematics and will prove to be an excellent college student. Students should identify their proposed field of study upon admission to IUP.

Internship Programs

Several departments in the College of Natural Sciences and Mathematics have established extensive internship programs under which students engage in an off-campus supervised work experience for credit.

For more information about specific internship programs, students should consult with the chairperson of the department in which the student is majoring. Students eligible for internships may receive federal or state funding.

Cooperative Programs

IUP has been fortunate to enter into cooperative agreements with a number of outstanding institutions to provide significant career opportunities to our students. These formal agreements provide for accelerated graduate or professional degree programs or carefully planned and coordinated undergraduate programming with the cooperating institution. Programs are intended to assure acceptance of properly qualified students by the cooperating professional schools. Additional information concerning the specific programs can be found under the appropriate academic department in this catalog.

- **Primary Care Scholars Program:** The Philadelphia College of Osteopathic Medicine (PCOM) has established the Primary Care Scholars Program with six Pennsylvania State System of Higher Education universities. The program will enable students who have demonstrated both academic excellence and a commitment to the practice of primary care in Pennsylvania to gain early admission to PCOM. Contact Dr. Allan Andrew for specific information regarding this program.
- **Chiropractic** (See Natural Science): The New York College of Chiropractic Medicine Program is designed to accelerate the professional training of IUP students in the field of chiropractic medicine.
- **Engineering - Drexel University** (See Department of Physics): The program with Drexel University combines the opportunity for two years of study at IUP with the remaining three years of study as part of the Drexel plan of cooperative education. A student completing this program will receive a bachelor's degree in engineering from Drexel University.
- **Engineering - University of Pittsburgh** (See Natural Science)
- **Family Medicine** (See Department of Biology): The program with Jefferson Medical College of Thomas Jefferson University increases the opportunities for IUP students to be admitted to Jefferson Medical College in the Family Medicine Program. The program is designed to provide physicians to rural communities in Pennsylvania where there is a physician shortage.
- **Lake Erie College of Osteopathic Medicine** (See Department of Biology). Lake Erie College of Osteopathic Medicine and IUP have a cooperative "3+4" program. Students will be awarded a Bachelor of Science degree in Biology from IUP upon successful completion of the first-year curriculum at Lake Erie College of Osteopathic Medicine and of the undergraduate requirements at IUP.
- **Primary Care Partnership:** The program with Pennsylvania State University College of Medicine enables the college to identify students with primary care potential and provide these students with the opportunity to interact with primary care faculty at the Pennsylvania State University College of Medicine. Contact Dr. Allan Andrew for specific information.
- **Forestry and Environmental Studies** (See Department of Biology): The program with Duke University is designed to coordinate the education of students from IUP with the graduate programs in forestry and environmental management offered at Duke University in Durham, North Carolina.
- **Podiatry** (See Natural Science): The Pennsylvania College of Podiatric Medicine program accelerates the professional training of IUP students in the field of podiatry.
- **Optometry** (See Natural Science): The Pennsylvania College of Optometry program accelerates the professional training of IUP students in the field of optometry.
- **Marine Science Consortium:** College majors may be interested in the programs available through the Marine Science Consortium. The Marine Science Consortium was established in 1968 for the purpose of promoting teaching and research in the marine sciences. Participating institutions include IUP and thirteen other colleges and universities. Although no separate major in the Marine Sciences exists, elective courses may be taken and credited toward undergraduate curricula in Biology, Geology, Geography, and Earth Science. The Marine Science Consortium offers five three-week sessions during the summer at the NASA -Wallops Island Station, Virginia. Normally, several research cruises are offered each summer.

  Students must register for credit and pay credit fees to a participating institution. Room and board fees are paid to the consortium. Applications for all summer sessions must be submitted to the institutional director by April 1. Students must be accepted by the consortium before registering at a participating institution. See section on Marine Science Consortium for a listing of courses. For brochure, summer bulletin, and application forms, contact Dr. Ray L. Winstead, Biology, or Dr. Darlene S. Richardson, Geoscience, who are the IUP directors and assist students in program planning.

Department of Biology

W. Barkley Butler, Chairperson; Andrew, Ayebo, Bharathan, Brenneman, Browe, Ciskowski, Dietrich, Forbes, Gendron, Hinrichsen, Hulse, Humphreys, Jack, Kesner, Linzey, Lord, Luciano, Nastase, Newell, Peard, Pickering, Pistole, Simmons, Winstead; and professors emeriti Gallati, Liegey, Moore, Schrock

Website: *http://www.iup.edu/biology*

Degrees offered by the Department of Biology are the Bachelor of Science in Biology, the Bachelor of Arts in Biology, the Bachelor of Science in Environmental Health, and the Bachelor of Science in Education with a Biology certification. The first three degree programs are under the College of Natural Sciences and Mathematics, and the fourth is under the College of Education and Educational Technology. The department also offers a Biology minor.

The program leading to a B.S. in Biology is designed to provide maximum depth in the sciences and mathematics with less opportunity for free electives. Students who plan to attend graduate school or professional schools, such as those in human or veterinary medicine, most often choose this program of studies.

Further, the B.S. in Biology automatically qualifies a student for a minor in chemistry and thus represents more than adequate preparation for employment opportunities that require expertise in both biology and chemistry.

The program leading to the B.A. in Biology is designed to allow greater opportunity for free electives. This freedom could be used to pursue interests in areas outside of biology, allowing for a more broadly based Liberal Arts education. Alternatively, the B.A. degree student would have the flexibility to pursue in depth (to minor in or perhaps even to double major in) another discipline. A Biology major combined with other sciences such as Biochemistry, Computer Science, Chemistry, Physics, Geoscience, Mathematics, or Psychology, or disciplines such as Art, English, Business, or a foreign language can make attractive packages for the student and for potential future employers.

Environmental Health Program

This program focuses on environmental and ecological factors as they relate to human well-being, including food safety, clean water and air, vector-borne diseases, and waste management. The Environmental Health Program is a preparation for employment in local, state, and federal agencies and industry as well as graduate school in a public health-related field. Between the junior and senior year, each student should serve an internship in the private or public sector.

B.S. in Education—Secondary Biology

The Department of Biology, in conjunction with the College of Education and Educational Technology, provides a program leading to the B.S. in Education with certification to teach biology. The program is committed to preparing teachers who possess a strong foundation in biology, a broad background in associated sciences, and an extensive preparation in pedagogy.

Foreign Language Requirement

Except for Biology Education majors, Biology majors must complete intermediate level or two semesters of foreign language starting at the highest level recommended by the freshman Pre-registration Placement Test in that language (may be included in Liberal Studies electives). This requirement can also be met by demonstrating proficiency in a foreign language equivalent to the intermediate level.

Cooperative Programs

The Biology Department cooperates in programs with Jefferson Medical College, Lake Erie College of Osteopathic Medicine, Duke University School of Forestry and Environmental Studies, Marine Science Consortium, Inc., and Pymatuning Laboratory of Ecology.

- **Duke Cooperative College Program in Forestry and Environmental Studies:** The Cooperative College program with the Duke University School of the Environment (*http://www.env.duke.edu/*) is designed to coordinate the undergraduate education of students at IUP with graduate programs in the areas of resources and environment offered at Duke. Undergraduate majors in one of the natural sciences, mathematics, economics, business, or political science are suited to the program. Preparation for the Duke program should include at least one year each of biology with work in botany, economics with a significant component of microeconomics, and mathematics which should include calculus, computer science, and statistics. Applicants to the Duke program who have completed courses in ecology, chemistry, geology, physics, and a foreign language or additional courses in biology, economics, and mathematics will be given preferential consideration. Students are accepted in either of two degree programs at Duke: the Master of Forestry (M.F.) or Master of Environmental Management (M.E.M.).

  Students may be accepted into the Duke graduate program after three years of high-quality undergraduate study at IUP or upon completion of the baccalaureate. Students who qualify after three years will have completed most of the undergraduate degree requirements at IUP except for total hours. Courses at Duke will be applied to the bachelor's degree at IUP. Dr. Jerry L. Pickering, Department of Biology, is the faculty advisor at IUP and assists students in program planning.

- **Jefferson Medical College-IUP Physician Shortage Area Program:** A cooperative Family Medicine Physician Education Program has been established by IUP and Jefferson Medical College of Thomas Jefferson University in Philadelphia for the purpose of improving the distribution of physicians in Pennsylvania. The program is designed to increase the opportunities for young women and men to practice family medicine in the rural communities of Pennsylvania where there is a shortage of physicians. Students interested in this program should enroll as Family Medicine majors.

  The program at Jefferson Medical College will admit approximately four graduates of IUP and twenty graduates of other colleges each year. Students from IUP will be admitted only if properly qualified according to the admission standards and policies of Jefferson Medical College. Applications are reviewed by the Joint IUP-Jefferson Subcommittee and recommendations made to the Jefferson Committee on Admissions.

- **Admission to Jefferson Medical College:** A strong preparation in the sciences and mathematics basic to medical school studies is required. A variety of college course formats and combinations, including biology, general and organic chemistry, and physics are a minimum. Courses taken to meet the basic requirements should be rigorous and, in general, comparable to courses accepted for concentration in these disciplines. Courses taken should be supplemented by laboratory experiences. Students may take upper-level science courses out of educational interest or to fulfill the requirements of their major. Taking additional science courses that cover material taught within the medical school curriculum is not helpful to gaining admission.

  Breadth of education is expected. Pursuit of some discipline in depth is encouraged. A successful medical student must actively acquire, synthesize, apply, and communicate information. These are skills that can be developed through a great variety of academic disciplines. Studies in the humanities and the social and behavioral sciences and development of effective writing skills are strongly suggested. Additional requirements for admission can be found in "Information for Prospective Students," published by Jefferson Medical College.

  Students who qualify for the Physician Shortage Area Program (PSAP) must certify their intentions to adhere to the following plan of education and practice: (a) complete the family medicine curriculum during their four years of medical education at Jefferson Medical College, including a six-week clerkship in a rural area; (b) complete a three-year family medicine residency; and (c) agree to practice family medicine in an underserved area. Preference will be given to Pennsylvania residents who are interested in this program, with highest priority given to those who actually live, at the time of application, in the underserved area in which they hope to practice. Dr. Allan Andrew, pre-medical advisor in the Biology Department, will assist students in program planning.

- **Lake Erie College of Osteopathic Medicine:** Lake Erie College of Osteopathic Medicine and IUP have a cooperative "3+4" program. Students will be awarded a Bachelor of Science degree in Biology from IUP upon successful completion of the first-year curriculum at Lake Erie College of Osteopathic Medicine and of the undergraduate requirements at IUP. In order to be considered for the program, students must be in the top 25 percent of their graduating class, have a minimum SAT score of 1150 (recentered), and have additional documented evidence of scholarly professional potential, leadership, and community involvement. While at IUP, these students must meet the following requirements:
  1. Cumulative GPA of 3.2 or better overall
  2. Cumulative GPA of 3.2 or better in prescribed science courses
  3. A grade of C or better in all courses
  4. Successful completion of Liberal Studies and required courses by the end of the third year
  5. Successful completion of MCAT (Medical College Admission Test) no later than the spring semester of the third year with desired scores of 7 or better in each subtest and an overall score of 24 or better
  6. Favorable letter of recommendation from the Premedical Advisory Committee
  7. Completion of AACOMAS application

- **Marine Science Consortium:** Biology majors interested in marine biology are encouraged to investigate summer courses offered through the Marine Science Consortium at Wallops Island, Virginia, by contacting Dr. Ray Winstead in the Biology Department. Courses offered have included Marine Biology, Tropical Marine Ecology, Fish Biology, Marine Invertebrates, and many more. These courses count as biology electives.
- **Pymatuning Laboratory of Ecology:** Biology majors can expand their selection of course offerings by participating in a cooperative program with the University of Pittsburgh's Field Station at the Pymatuning Laboratory of Ecology located in northwestern Pennsylvania. These elective courses center on ecological and environmental topics, i.e., Ecology, Field Botany, Vertebrate Ecology, Aquatic Entomology, Behavioral Ecology, and Experimental Design. Application and registration for both summer sessions must be completed by April 1. Students register for credit and pay fees at IUP. Books, lab fee, and room and board are paid to the Pymatuning Laboratory of Ecology. Dr. Anthony J. Nastase is the faculty advisor for this cooperative program and assists students in program planning, application, and registration.

IUP Department of Biology/University of Zimbabwe Department of Biological Sciences Exchange Program

The Department of Biology reciprocal exchange program with the University of Zimbabwe Department of Biological Sciences encourages both faculty and student exchanges in the major disciplines of biology. Students register and pay the cost of housing and meals, as well as any other mandatory semester fees in their home institution, and are then covered by the one-for-one exchange by the host institution. Course semester hours are transferable. Exchange of faculty and professional staff is also based on the principle of reciprocity. Dr. Amadu Ayebo, coordinator, will assist students in program planning.

Mentor Program and Biology Residence Floor

The Department of Biology offers a Peer Mentor Program that allows incoming students, new to IUP and new to Biology, to quickly gain an academic home. New students are assigned an upper-level Peer Mentor to help guide them through the curriculum, requirements, and programs within our department and college. A fall off-campus retreat is an important component of our Mentor Program, and students are expected to attend.

Elkin Hall, just behind Weyandt Hall (the home of the Department of Biology), has a single residence floor dedicated to Biology, Environmental Health, Biology Education, and Preprofessional (Pre-Med, Pre-Vet) students. Students with similar professional and academic interests can share life experiences by being part of this component of our academic community. Undeclared or Natural Science students with interests in Biology may also apply to be on this floor.

Degree Programs

In the programs of study that follow, no more than 6 semester hours total from internships, independent study, and special topics can be counted toward biology course requirements. Credits beyond six earned from these sources are counted as general electives. Note: Students changing into the majors of Biology, Biology Education, or Environmental Health are required to have a 2.5 cumulative GPA or permission of the chairperson.

Bachelor of Arts—Biology

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **55-56**
Mathematics: MATH 121
Natural Science: CHEM 111-112
Liberal Studies Electives: no courses with BIOL prefix

Major: **32**
Required Courses:

BIOL 111	Principles of Biology I	4sh
BIOL 112	Principles of Biology II	4sh
BIOL 210	Botany	3sh
BIOL 220	General Zoology	3sh
BIOL 250	Principles of Microbiology	3sh
BIOL 263	Genetics	3sh
Controlled Electives:		
Biology electives (major courses only)		12sh (1)

Other Requirements: **8**
Chemistry Sequence

CHEM 231	Organic Chemistry I	4sh
CHEM 351	Biochemistry (2)	4sh
Foreign Language Intermediate Level (3)		0-6sh

Free Electives: **29**

Total Degree Requirements: **124**

(1) No more than 6sh total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives.
(2) The two-semester (6sh) sequence of BIOC 301-302 can be substituted for CHEM 351 to meet the biochemistry requirement.
(3) See Foreign Language requirement. Intermediate-level foreign language may be included in Liberal Studies electives. Introductory-level foreign language courses count as free electives.

Bachelor of Science—Biology

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **56-57**
Mathematics: MATH 121
Natural Science: CHEM 111-112
Liberal Studies Electives: PHYS 111 and either MATH 122 OR MATH 216, no courses with BIOL prefix

Major: **38**
Required Courses:

BIOL 111	Principles of Biology I	4sh
BIOL 112	Principles of Biology II	4sh
BIOL 210	Botany	3sh
BIOL 220	General Zoology	3sh
BIOL 250	Principles of Microbiology	3sh
BIOL 263	Genetics	3sh
Controlled Electives:		
Biology electives (major courses only)		18sh (1)

Other Requirements: **17**
Chemistry Sequence

CHEM 231	Organic Chemistry I	4sh
CHEM 232	Organic Chemistry II (2)	4sh
CHEM 351	Biochemistry (3)	4sh
Physics Sequence		
PHYS 121	Physics I Lab	1sh
PHYS 112	Physics II Lecture	3sh
PHYS 122	Physics II Lab	1sh
Foreign Language Intermediate Level (4)		0-6sh

Free Electives: **13**

Total Degree Requirements: **124**

(1) No more than 6sh total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives.
(2) Students may substitute a third math course (MATH 122 or 216) for CHEM 232.
(3) The two-semester (6sh) sequence of BIOC 301-302 can be substituted for CHEM 351 to meet the biochemistry requirement.
(4) See Foreign Language requirement. Intermediate-level foreign language may be included in Liberal Studies electives. Introductory-level foreign language courses count as free electives.

Bachelor of Science in Education—Biology (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54**
Mathematics: MATH 110 or 121 (1)
Natural Science: CHEM 111-112
Social Science: PSYC 101
Liberal Studies Electives: PHYS 111, no courses with BIOL prefix, one course must have a GEOS prefix from the Liberal Studies Natural Science, Option II, Nonlaboratory List.

College:		**30**
Professional Education Sequence: (2)		
COMM 103	Digital Instructional Technology	3sh
EDSP 102	Educational Psychology	3sh
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh
EDUC 242	Pre-student Teaching Clinical Experience I	1sh
EDUC 342	Pre-student Teaching Clinical Experience II	1sh
EDUC 441	Student Teaching (3)	12sh
EDUC 442	School Law	1sh
EDUC 451	Teaching Science in the Secondary Schools	3sh
FDED 102	American Education in Theory and Practice	3sh
Major:		**30**
Required Courses:		
BIOL 111	Principles of Biology I	4sh
BIOL 112	Principles of Biology II	4sh
BIOL 210	Botany	3sh
BIOL 220	General Zoology	3sh
BIOL 250	Principles of Microbiology	3sh
BIOL 263	Genetics	3sh
BIOL 480	Biology Seminar	1sh
Controlled Electives:		
Biology electives: (major courses only)		9sh (4)
Other Requirements:		**13**
Chemistry Sequence		
CHEM 231	Organic Chemistry I	4sh
CHEM 351	Biochemistry (5)	4sh
Physics Sequence		
PHYS 121	Physics I Lab	1sh
PHYS 112	Physics II Lecture	3sh
PHYS 122	Physics II Lab	1sh
Free Electives:		**0**
(#)Total Degree Requirements:		**127**

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(1) Program revision in process – 3 additional sh of math will be required by the Pennsylvania Department of Education.
(2) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EDEX 301 (2sh).
(3) Eligibility for student teaching and certification in secondary biology education requires a cumulative GPA of 2.75 and a grade of C or better in all biology courses. The program in secondary biology education requires a cumulative GPA of 2.75 for all majors.
(4) No more than 6sh from Independent Study (BIOL 482), Special Topics (BIOL 481), or Internship (BIOL 493) applies to major: excess applied as free electives
(5) The two-semester (6sh) sequence of BIOC 301-302 can be substituted for CHEM 351 to meet the biochemistry requirement.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Bachelor of Science—Environmental Health

Liberal Studies: As outlined in Liberal Studies section with the following specifications:		**56**
Mathematics: MATH 121		
Natural Science: CHEM 111-112		
Social Science: ECON 101		
Liberal Studies Electives: BTED/COSC/IFMG 101, MATH 216, PHYS 111		
Major:		**30**
Required Courses:		
BIOL 111	Principles of Biology I	4sh
BIOL 112	Principles of Biology II	4sh
BIOL 210	Botany	3sh
BIOL 220	General Zoology	3sh
BIOL 241	General Microbiology	3sh
BIOL 310	Applied Entomology and Zoonoses	3sh
BIOL 321	Environmental Protection I	3sh
BIOL 322	Environmental Protection II	3sh
BIOL 480	Biology Seminar	1sh
Controlled Electives:		
Biology electives (major courses only)		3sh (1)
Other Requirements:		**31**
Required Courses:		
CHEM 231	Organic Chemistry I	4sh
CHEM 323	Analytical Methods	4sh
PHYS 121	Physics I Lab	1sh
PHYS 112	Physics II Lecture	3sh
PHYS 122	Physics II Lab	1sh
PLSC 250	Public Policy	3sh
SAFE 101	Intro to Occupational Safety and Health	3sh
SAFE 301	Health Hazard Identification	3sh
Controlled Electives:		
BIOL 493	Biology Internship (1) or controlled electives (2)	9sh
Foreign Language Intermediate Level (3)		0-6sh
Free Electives:		**7**
Total Degree Requirements:		**124**

(1) No more than 6sh total from Independent Study, Special Topics, or Internship applies to major, excess applied as free electives. At least one writing-intensive course within the major (e.g., BIOL 362 or SAFE 462) must be taken to fulfill Liberal Studies requirements.
(2) The following courses count as controlled electives: BIOL 362, 463, 476, CHEM 232, GEOS 121, 122, 331, SAFE 402, 461, 462.
(3) See Foreign Language Requirement. Foreign Language courses are counted as free electives.

Minor—Biology 20

Required Courses:		
BIOL 103-104	General Biology I and II or	
BIOL 111-112	Principles of Biology I and II	8sh
Additional BIOL courses		12sh (1) (2)

Other Requirements:
a) Student must have at least a 2.0 GPA in all BIOL courses for the minor.
b) Student must take at least 6sh of biology courses at IUP.
c) Must have permission of biology department chairperson
(1) With approval of department chairperson.
(2) At least 8 of the 12 required additional BIOL sh must come from 200 level or higher courses.

Biochemistry Program

Jonathan N. Southard and N. Bharathan, Co-Coordinators; Butler, Dietrich, Ford, Harding, Hinrichsen, Luciano, Sowa, Biology and Chemistry faculties

Website: *http://www.iup.edu/biochemistry*

The B.S. in Biochemistry is a four-year degree curriculum offered as a cooperative program by the Biology and Chemistry departments. This Biochemistry Program also offers a minor in Biochemistry.

The curriculum leading to a B.S. in Biochemistry begins with foundation courses in biology, chemistry, mathematics, and physics in the first two years. Specialization in biochemistry commences in the third year with courses in biochemistry, genetics, physical chemistry, Special Topics in Biochemistry, and Biochemistry Seminar.

A unique feature of this undergraduate program is that Biochemistry research is a requirement. After consultation with faculty, the students will define a problem and devise an experimental plan through library research. Laboratory research will be done under the direct supervision of a faculty member. Finally, the student will report on the results of the research in both written and oral forms.

The B.S. in Biochemistry Program is intended for those students whose interests lie in a most exciting field of modern science. Graduates of this program can expect to be qualified to enter graduate programs in biochemistry, biology, chemistry, and molecular biology, professional schools in the health sciences, and positions in industrial and government research laboratories and in industrial production facilities.

Bachelor of Science—Biochemistry

Liberal Studies: As outlined in the Liberal Studies section with the following specifications: **56-59**
Mathematics: MATH 123
Natural Science: PHYS 131-141 and 132-142
Liberal Studies Electives: MATH 124, no courses with BIOC prefix; one course must be 200-level or higher.

Major:			**51**
Required Courses:			
BIOC 301-311	Biochemistry I and Lab	4sh	
BIOC 302-312	Biochemistry II and Lab	4sh	
BIOC 480	Biochemistry Seminar I	1sh (1)	
BIOC 481	Special Topics in Biochemistry	3sh	
BIOC 482	Independent Research in Biochemistry	2sh	
BIOC 490	Biochemistry Seminar II	1sh (1)	
BIOL 111	Principles of Biology I	4sh	
BIOL 263	Genetics	3sh	
BIOL 250	Principles of Microbiology	3sh	
BIOL 401	Laboratory Methods in Biology and Biotechnology	3sh	
CHEM 113	Concepts in Chemistry	4sh	
CHEM 114	Basic Inorganic Chemistry	4sh	
CHEM 231	Organic Chemistry I	4sh	
CHEM 232	Organic Chemistry II	4sh	
CHEM 323	Analytical Methods	4sh	
CHEM 340	Physical Chemistry for the Biological Sciences	3sh	
Controlled Electives:			**6-7**
Advanced Biology course chosen from: BIOL 331, 350, 352, 364, or 453		3sh	
Either MATH 216 or COSC 110		3-4sh	
Other Requirements:			
Foreign Language Intermediate Level (2)			**0-6**
Free Electives:			**7-11**
Total Degree Requirements:			**124**

(1) 1sh each semester of senior year.
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Minor–Biochemistry **17-20**

Total semester hours will depend on the controlled electives used (9sh minimum required to 12sh for three 4sh electives).

Required Courses:			**8**
BIOC 301	Biochemistry I (1a)	3sh	
BIOC 302	Biochemistry II	3sh	
BIOC 311	Biochemistry Laboratory I (1a)	1sh	
BIOC 312	Biochemistry Laboratory II	1sh	
Other Requirements:			**9-12**
At least three controlled electives from following list (1):			
BIOC 480	Biochemistry Seminar I	1sh	
BIOC 481	Special Topics in Biochemistry	1-3sh	
BIOC 490	Biochemistry Seminar II	1sh	
BIOL 250	Principles of Microbiology (1b, d)	3sh	
BIOL 263	Genetics (1b)	3sh	
BIOL 350	Cellular Physiology	3sh	
BIOL 352	Comparative Animal Physiology (1d)	3sh	
BIOL 364	Immunology (1d)	3sh	
BIOL 401	Laboratory Methods in Biology and Biotechnology (1d)	3sh	
BIOL 453	Plant Physiology (1d)	3sh	
CHEM 232	Organic Chemistry II (1c)	4sh	
CHEM 322	Instrumental Analysis (1c, d)	4sh	
CHEM 323	Analytical Methods	4sh	

(1) Or other 200-level or higher Biology or Chemistry courses with permission of chairperson of offering department. A minimum of 9sh is required.
   a. BIOL 111 and CHEM 232 are prerequisites.
   b. Required for Biology major.
   c. Required for Chemistry major.
   d. These courses have prerequisites not needed for the required courses.

Department of Chemistry

Ruiess V. F. Ramsey, Chairperson; Asting, Ballas, Crumm, Eddy, Elcesser, Ford, Harding, Klavetter, Ko, Kondo, Kupchella, Lake, Long, See, Southard, Sowa, Syty, Varughese, Wood, Woolcock; and professors emeriti Bordas, Costa, Fazio, McKelvey, Patsiga, Scroxton, Tackett, Wunz, Zambotti

Website: *http://www.iup.edu/chemistry*

Degrees offered by the Department of Chemistry are the Bachelor of Science in Chemistry, the Bachelor of Arts in Chemistry, and the Bachelor of Science in Education with a Chemistry major. The first two degree programs are under the College of Natural Sciences and Mathematics, and the third is under the College of Education and Educational Technology. The department also offers a Chemistry minor.

The B.S. in Chemistry is a professional degree and is certified by the American Chemical Society. The student completing this major should be qualified to assume a position in industry or government as a chemist or to apply for admission to graduate school to pursue advanced studies leading to the M.S. or Ph.D. degree. The student considering going to a professional school who also wishes to complete this degree should elect appropriate courses as required by the professional school in addition to the courses required here. Those students who are particularly interested in biochemistry should elect a few selected biology courses.

The curriculum leading to the B.A. in Chemistry is designed to allow for the workable union of nonscience areas with chemistry in such a way as to retain the fundamental science and mathematics requirements needed for a career in chemistry. A careful selection of electives will qualify the student for entrance into many fields in which there is an acute need for educated people and, at the same time, satisfy the entrance requirements of various professional and graduate schools.

Some possible and useful combinations between chemistry and other disciplines would include chemistry-biology, chemistry-business administration, chemistry-computer science, chemistry-criminology, chemistry-government, chemistry-pre-dental, chemistry-pre-law, chemistry-safety science, chemistry-pre-medicine, and chemistry-English (technical writing). The student must arrange a practical sequence of non-chemistry courses in consort with his/her advisor and the department chairperson concerned. A student seeking a career in forensic science should major in chemistry. The department also offers pre-medical programs in both the B.S. and B.A. curricula. These programs prepare the student to satisfy the entrance requirements of medical schools.

The curriculum leading to the B.S. in Education with a Chemistry major is designed to prepare the student to teach chemistry at the secondary school level. Upon completion of the specified coursework and the requirements for teacher certification processes, the student is eligible for Pennsylvania certification by the Pennsylvania Department of Education.

Bachelor of Arts—Chemistry

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **56-57**
Mathematics: MATH 121 or 123
Natural Science: PHYS 111-121 and 112-122 or PHYS 131-141 and 132-142
Liberal Studies Electives: MATH 122 or 124, no courses with CHEM prefix

Major:			29
Required Courses:			
CHEM 113	Concepts in Chemistry	4sh	
CHEM 114	Basic Inorganic Chemistry	4sh	
CHEM 231	Organic Chemistry I	4sh	
CHEM 232	Organic Chemistry II	4sh	
CHEM 321	Quantitative Analysis	4sh	
CHEM 322	Instrumental Analysis	4sh	
CHEM 341	Physical Chemistry I	4sh	
CHEM 343	Physical Chemistry Laboratory I	1sh	
Other Requirements:			15-21
Planned program in complementary field (advisor approval) with 6sh in 300/400 level courses (2)		15sh (1)	
Foreign Language Intermediate Level (3)		0-6sh	
Free Electives:			17-24
Total Degree Requirements:			124

(1) Recommended fields: Biology, Business, Computer Science, Criminology, Dietetics, Economics, English, Foreign Language, Geoscience, Mathematics, Safety Science, Physics, Political Science, Psychology.
(2) Chemistry Pre-Med program requires BIOL 111, 112, 263, 331.
(3) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Chemistry

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **56-57**
Mathematics: MATH 123
Natural Sciences: PHYS 131-141 and 132-142
Liberal Studies Electives: MATH 124, no courses with CHEM prefix

Major:			44
Required Courses:			
CHEM 113	Concepts in Chemistry	4sh	
CHEM 114	Basic Inorganic Chemistry	4sh (1)	
CHEM 231	Organic Chemistry I	4sh	
CHEM 232	Organic Chemistry II	4sh	
CHEM 301	Chemistry Seminar	1sh	
CHEM 321	Quantitative Analysis	4sh	
CHEM 322	Instrumental Analysis	4sh	
CHEM 341	Physical Chemistry I	4sh	
CHEM 342	Physical Chemistry II	3sh	
CHEM 343	Physical Chemistry Laboratory I	1sh	
CHEM 344	Physical Chemistry Laboratory II	1sh	
CHEM 410	Advanced Inorganic Chemistry Laboratory	1sh	
CHEM 411	Advanced Inorganic Chemistry	3sh	
Controlled Electives:			
Additional Chemistry electives from list: CHEM 331, 335, 351, 376, 412, 421, 441, 498		6sh (2)	
Other Requirements:			7-14
Additional math: COSC 110 and one additional course from: MATH 171, 227, 241, 342		7-8sh	
Pre-Med program (3)			
Foreign Language Intermediate Level (4)		0-6sh	
Free Electives (5)			9-17
Total Degree Requirements:			124

(1) Those who took CHEM 111 and 112 should take CHEM 116 for American Chemical Society (ACS) certified B.S.
(2) CHEM 498 (2sh) required for ACS certification.
(3) Chemistry/Pre-Med program requires BIOL 111, 112, 263, 331, 352, and CHEM 351.
(4) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(5) Pre-Med requires Biology sequence 18sh.

Bachelor of Science in Education—Chemistry (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **56-57**
Mathematics: MATH 123
Natural Science: PHYS 111-121 and 112-122
Social Science: PSYC 101
Liberal Studies Electives: GEOS 111 or 113, MATH 124, no courses with CHEM prefix

College:			32
Professional Education Sequence			
COMM 103	Digital Instructional Technology	3sh	
EDUC 242	Pre-student Teaching Clinical Experience I	1sh	
EDUC 342	Pre-student Teaching Clinical Experience II	1sh	
EDUC 441	Student Teaching	12sh	
EDUC 442	School Law	1sh	
EDUC 451	Teaching Science in the Secondary School	3sh	
EDSP 102	Educational Psychology	3sh	
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh	
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2sh	
FDED 102	American Education in Theory and Practice	3sh	
Major:			33-35
Required Courses:			
CHEM 113	Concepts in Chemistry	4sh	
CHEM 114	Basic Inorganic Chemistry	4sh	
CHEM 231	Organic Chemistry I	4sh	
CHEM 232	Organic Chemistry II	4sh	
CHEM 321	Quantitative Analysis	4sh	
CHEM 322	Instrumental Analysis	4sh	
CHEM 341	Physical Chemistry I	4sh	
CHEM 343	Physical Chemistry Laboratory I	1sh	
CHEM 498	Problems in Chemistry	1-2sh	
Controlled Electives:			
One additional chemistry course from list: CHEM 342, 351, 411		3-4sh	
Other Requirements:			5
BIOL 111	Principles of Biology I	4sh	
GEOS 112 or 114 Earth Science for Educators Lab I or II		1sh	
Free Electives:			0
(#)Total Degree Requirements:			126-129

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Minor—Chemistry 20

Required Courses:		
CHEM 111	General Chemistry I	4sh
CHEM 112	General Chemistry II	4sh
CHEM 231	Organic Chemistry I	4sh
CHEM 232	Organic Chemistry II	4sh
One chemistry elective from: CHEM 321, CHEM 323, CHEM 351		4sh

Department of Computer Science

Gary L. Buterbaugh, Chairperson; Ali, Cross, Cunningham, Micco, Oblitey, O'Neil, Shubra, Wolfe, Yang; and professor emeritus Tompkins

Website: *http://www.iup.edu/compsci*

The programs in Computer Science at IUP lead to the B.S. or B.A. degree and are designed primarily to prepare graduates for productive work in highly computer-dependent areas of business, government, and industry. In recent years, majors graduating from the program have attained their first jobs in business applications, programming and systems analysis, computer software development, scientific and applied mathematical programming, and other computer-related areas and have gone to graduate school.

In a rapidly developing field such as Computer Science, it is important that the graduate's education be broad and fundamental so that new trends can more readily be followed. Our goal is to balance fundamentality and breadth with sufficient supervised practice so that our graduates are productive at the time they graduate but ready and willing to change with the field.

Most applied computer scientists work in cooperation with professionals trained in other areas and with managers. Hence, the ability to work and communicate with others of different educational backgrounds is an important characteristic. To that end, we encourage Computer Science majors to take a strong minor (or area concentration) in a second area of interest. Some students may wish to double major. Majors in other disciplines at IUP are also welcome to take Computer Science courses for which they are qualified or a Computer Science minor.

Students majoring in Computer Science should set their goals beyond simple programming and should be preparing

1. to program well, both in design and implementation phases, and document what they have programmed
2. to analyze real-world problems in preparation for program design and implementation
3. to manage activities that are strongly computer dependent
4. to improve the tools that programmers and systems analysts use, i.e., to develop
   a. better software systems
   b. better graphical user interfaces
   c. better languages for communicating with computers
   d. better web-based interfaces and databases
   e. better methods for solving intractable problems
5. to teach about computers at college or high school level
6. to advance the fundamental theory of digital information processors

Bachelor of Arts—Computer Science

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **55-58**
Mathematics: MATH 123 (or MATH 121-122)
Liberal Studies Electives: MATH 216 (or MATH 214 or 217), no courses with COSC prefix

Major: **35**
Required Courses:

COSC 105	Fundamentals of Computer Science	3sh
COSC 110	Problem Solving and Structured Programming	3sh
COSC 220	Applied Computer Programming	3sh
COSC 300	Assembly Language Programming	3sh
COSC 310	Data Structures	3sh
COSC 315	Large File Organization and Access	3sh
COSC 380	Seminar on the Computer Profession	1sh
COSC 480	Seminar on Technical Topics	1sh

Controlled Electives:
Select 9sh from : (1)

COSC 250	Introduction to Numerical Methods	3sh
COSC 304	Interactive Internet Programming with Java	3sh
COSC 319	Software Engineering Concepts	3sh
COSC 320	Software Engineering Practice	3sh
COSC 345	Data Communications	3sh
COSC/IFMG 354	Testing and Controlling LANs	3sh
COSC 355	Computer Graphics	3sh
COSC 360	IBM Job Control Language	1sh
COSC 362	UNIX Systems	
COSC 481	Special Topics in Computer Science (only sections approved for majors)	1-4sh
COSC 482	Independent Study	1-4sh
COSC 493	Internship in Computer Science	12sh (2)
IFMG 455	Data Warehousing and Mining	3sh

Upper-level Electives by Categories: 6sh (3)
Computer Architecture: COSC 410
Theory of Languages: COSC 419, 420, 424, 460
Systems Programming: COSC 430, 432
Numerical Methods: COSC 450, 451
Artificial Intelligence: COSC 405
Database Management: COSC 441, 444

Other Requirements: **6-22**
Additional Writing:

ENGL 322	Technical Writing	3sh
Foreign Language Intermediate Level		0-6sh (4)
Additional Mathematics:		3-13sh (5)
MATH 123	Calculus I for Physics, Chemistry, and Mathematics (MATH 121 and 122 may be substituted)	
MATH 216	Probability and Statistics for Natural Sciences (MATH 363 and 364, MATH 214 and 417, or MATH 217 and 417 may be substituted)	
MATH 219	Discrete Mathematics	

Free Electives: **9-28**

Total Degree Requirements: **124**

(1) Select at least 9sh from the list of controlled electives and/or the list of upper-level electives. Note: Only 4sh of COSC 493 may be counted toward these 9sh.
(2) COSC 493 may be selected in either the second semester of the junior year or the first semester of the senior year. If COSC 493 is selected and approved, COSC 380 should be taken in the immediately preceding semester.
(3) Select at least two additional courses, from at least two different categories, from the list of upper-level electives.
(4) Foreign Language intermediate-level courses are counted as Liberal Studies electives.
(5) Any of the Mathematics options satisfy the Learning Skill requirement, and one course may be counted as a Liberal Studies elective. The 3sh minimum applies to students who take MATH 123 and 216. The 13sh maximum applies to students who take the MATH 121-122 calculus option and the MATH 363-364 statistics option.

Bachelor of Science—Computer Science/Applied Computer Science Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54-58**
Mathematics: MATH 123 (or MATH 121-122)
Liberal Studies Electives: MATH 216 (or MATH 214 or 217), no courses with COSC prefix

Major: **38**
Required Courses:

COSC 105	Fundamentals of Computer Science	3sh
COSC 110	Problem Solving and Structured Programming	3sh
COSC 220	Applied Computer Programming	3sh
COSC 300	Assembly Language Programming	3sh
COSC 310	Data Structures	3sh
COSC 315	Large File Organization and Access	3sh
COSC 319	Software Engineering Concepts	3sh
COSC 380	Seminar on the Computer Profession	1sh
COSC 441	Database Management	3sh
COSC 480	Seminar on Technical Topics	1sh

Select one of the following two courses:

COSC 320	Software Engineering Practice	3sh (1)
COSC 493	Internship in Computer Science	12sh (2)

Controlled Electives:
Select 6sh: (3)

COSC 250	Introduction to Numerical Methods	3sh
COSC 304	Interactive Internet Programming with Java	3sh
COSC 345	Data Communications	3sh
COSC/IFMG 354	Testing and Controlling LANs	3sh
COSC 355	Computer Graphics	3sh
COSC 360	IBM Job Control Language	1sh
COSC 362	UNIX Systems	3sh
COSC 481	Special Topics in Computer Science (only sections approved for majors)	1-4sh
COSC 482	Independent Study	1-4sh
IFMG 455	Data Warehousing and Mining	3sh

Upper-level Electives by Categories: Select 3sh (4)
Computer Architecture: COSC 410
Database Management: COSC 444
Theory of Languages: COSC 419, 420, 424, 460
Systems Programming: COSC 430, 432
Numerical Methods: COSC 450, 451
Artificial Intelligence: COSC 405

Other Requirements: **6-22**
Additional Writing:

ENGL 322	Technical Writing	3sh
Foreign Language Intermediate Level		0-6sh (5)
Additional Mathematics:		3-13sh (6)
MATH 123	Calculus I for Physics, Chemistry, and Mathematics (MATH 121 and 122 may be substituted)	
MATH 216	Probability and Statistics for Natural Sciences (MATH 363 and 364, MATH 214 and 417, or MATH 217 and 417 may be substituted)	
MATH 219	Discrete Mathematics	

Complete a minor from one of the following areas from: **6-18**

a)	Any department in the College of Natural Sciences and Mathematics	6-18sh
b)	Designated Business courses	18sh
c)	Designated Economics courses	15sh
d)	Designated Geography courses	15sh
e)	Designated Communications Media courses	18sh

Free Electives: **0-20**

Total Degree Requirements: **124**

(1) Credit for both COSC 320 and 493 may be counted toward the degree, but only one will be counted toward the major requirements.
(2) COSC 493 may be selected in either the second semester of the junior year or the first semester of the senior year. If COSC 493 is selected and approved, COSC 380 may be taken in the immediately preceding semester.
(3) Select at least 6sh from the list of controlled electives and/or the list of upper-level electives.
(4) Select at least one additional course from the list of upper-level electives.
(5) Foreign Language intermediate-level courses are counted as Liberal Studies electives.
(6) Any of the Mathematics options satisfy the Learning Skill requirement, and one course may be counted as a Liberal Studies elective. The 3sh minimum applies to students who take MATH 123 and 216. The 13sh maximum applies to students who take the MATH 121-122 calculus option and the MATH 363-364 statistics option.

Bachelor of Science—Computer Science/Languages and Systems Track

Liberal Studies: As stated in Liberal Studies Requirements with the following specifications: **54-58**
Mathematics: MATH 123 (or MATH 121-122)
Liberal Studies Electives: MATH 124, no course with COSC prefix

Major:
Required Courses: **41**

COSC 105	Fundamentals of Computer Science	3sh
COSC 110	Problem Solving and Structured Programming	3sh
COSC 220	Applied Computer Programming	3sh
COSC 300	Assembly Language Programming	3sh
COSC 310	Data Structures	3sh
COSC 315	Large File Organization and Access	3sh
COSC 319	Software Engineering Concepts	3sh
COSC 380	Seminar on the Computer Profession	1sh
COSC 410	Processor Architecture and Microprogramming	3sh
COSC 420	Modern Programming Languages	3sh
COSC 432	Introduction to Operating Systems	3sh
COSC 480	Seminar on Technical Topics	1sh

Controlled Electives: Select 9sh (1)

COSC 250	Introduction to Numerical Methods	3sh
COSC 304	Interactive Internet Programming with Java	3sh
COSC 320	Software Engineering Practice	3sh (2)
COSC 345	Data Communications	3sh
COSC/IFMG 354	Testing and Controlling LANs	3sh
COSC 355	Computer Graphics	3sh
COSC 360	IBM Job Control Language	1sh
COSC 362	UNIX Systems	3sh
COSC 405	Artificial Intelligence	3sh
COSC 419	Software Development with Ada	3sh
COSC 424	Compiler Construction	3sh
COSC 430	Introduction to Systems Programming	3sh
COSC 441	Database Management	3sh
COSC 444	Productivity Tools and Fourth Generation Language	3sh
COSC 450	Applied Numerical Methods	3sh
COSC 451	Numerical Methods for Supercomputers	3sh
COSC 460	Theory of Computation	3sh
COSC 481	Special Topics in Computer Science (as approved for majors)	1-4sh
COSC 482	Independent Study	1-4sh
COSC 493	Internship in Computer Science	12sh (3)
IFMG 455	Data Warehousing and Mining	3sh

Other Requirements: **13-25**
Additional writing:

ENGL 322	Technical Writing I	3sh
Foreign Language Intermediate Level		0-6sh (4)
Mathematics: A minor in mathematics including the following courses:		10-16sh (5)
MATH 123	Calculus I for Physics, Chemistry, and Mathematics (MATH 121 and 122 may be substituted)	
MATH 124	Calculus II for Physics, Chemistry, and Mathematics	
MATH 171	Introduction to Linear Algebra	
MATH 216	Probability and Statistics for Natural Sciences (MATH 363 and 364 may be substituted)	
MATH 219	Discrete Mathematics	

Free Electives: **0-16**

Total Degree Requirements: **124**

(1) Select at least 9sh from the list of controlled electives. Note: Only 4sh of COSC 493 may be counted toward these 9sh.
(2) Credit for both COSC 320 and 493 may be counted toward the degree, but only one will be counted toward the major requirements.
(3) COSC 493 may be selected in either the second semester of the junior year or the first semester of the senior year. If COSC 493 is selected and approved, COSC 380 may be taken in the immediately preceding semester.
(4) Foreign Language intermediate-level courses are counted as Liberal Studies electives.
(5) Credit for MATH 123 and 124 are counted in Liberal Studies.

Minor—Computer Science 15

Required Courses:
COSC electives (1) (2) (3) 15sh

(1) The minor in Computer Science consists of 15sh of COSC electives. At least 9sh of the 15sh must be from COSC courses numbered higher than 200.
(2) COSC 101 is an appropriate entry course for minors or for students who wish to take only one course. However, COSC 101 cannot be counted as part of a Computer Science minor by Management Information Systems (MIS) majors.
(3) See Computer Science minor advisor for suggestions.

Department of Geoscience

Darlene S. Richardson, Chairperson; Cercone, Hall, Hovan, Putirka, Sutton, Taylor; and professor emeritus Park

Website: *http://www.iup.edu/geoscience*

The Department of Geoscience provides curricula in areas of natural science dealing with and related to the earth and its environment by offering courses in astronomy, geology, meteorology, and oceanography.

In addition to on-campus instruction, opportunities exist for summer coursework and research in geology and oceanography at the Marine Science Consortium located at Wallops Island, Virginia.

Degrees offered by the department are the Bachelor of Science in Geology, the Bachelor of Science in Environmental Geoscience, and the Bachelor of Science in Education with a major in Earth and Space Science or with a major in General Science. The first two degree programs are under the College of Natural Sciences and Mathematics, and the last two are under the College of Education and Educational Technology.

The B.S. degree in Geology is, in a sense, a dual-purpose degree program. Not only is it designed to graduate well-trained, competent geologists, able to compete for positions as professional geologists in the job market; it is also designed to provide the student with the necessary allied science and mathematics background to enable the good student to qualify for admission to the graduate school of his/her choice in Geology.

The B.S. degree in Environmental Geoscience offers the student a broad-based science background. In addition to a firm foundation in Geology-Geoscience courses, the student will also acquire a background in Biology and Chemistry. This will provide thorough training for the rapidly growing field of Environmental Geoscience, both for students who plan to pursue postgraduate training in this field and for those who plan to enter directly into jobs in federal and state agencies and private consulting firms.

The department recognizes as one of its functions the role of serving the field of public education by the preparation of qualified and certified teachers of earth and space science. Also, because of the interdisciplinary nature of both the department and the requirements for preparing general science teachers, the department administers the program designed to lead to general science certification and includes majors of that category as department members.

Minor in Geology

The minor in Geology consists of 17 semester hours. Required are GEOS 121-122 and GEOS 131-132. Three upper-level (300 or higher) courses in geology (total 9sh) will make up the remaining requirements for the minor in Geology totaling 17 semester hours.

Bachelor of Science—Geology

Liberal Studies: As outlined in Liberal Studies section 56-57
with the following specifications:
Mathematics: MATH 121 or 123
Natural Science: CHEM 111-112 or 113-114
Liberal Studies Electives: MATH 122 or 124, no courses with GEOS prefix

Major: 44
Required Courses: (1)

GEOS 121	Physical Geology	3sh
GEOS 122	Physical Geology Laboratory	1sh
GEOS 131	Historical Geology	3sh
GEOS 132	Historical Geology Laboratory	1sh
GEOS 320	Igneous and Metamorphic Petrology	3sh
GEOS 321	Mineralogy	3sh
GEOS 325	Structural Geology	3sh
GEOS 326	Field Geology or summer field course (offered by other universities) (1) (2)	3sh
GEOS 330	Paleontology	3sh
GEOS 362	Plate Tectonics	3sh
GEOS 380	Research Methods in Geoscience	2sh
GEOS 411	Sedimentary Petrology	3sh
GEOS 412	Stratigraphy or GEOS 327 Geomorphology	3sh
GEOS 480	Geoscience Seminar	1sh

Controlled Electives: 9sh
GEOS courses 300 or above

Other Requirements: 8-14
Additional Science:

PHYS 111-121	Physics I Lecture/Lab	4sh
PHYS 112-122	Physics II Lecture/Lab	4sh
Foreign Language Intermediate Level (3,4)		0-6sh

Free Electives: 9-16

Total Degree Requirements: 124

(1) Summer field camp in geology (5-9sh) is strongly recommended.
(2) A maximum of 6sh from approved summer field camp may apply to a required core and controlled electives (3sh).
(3) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(4) 6sh of computer languages substitute for the foreign language requirement: COSC 110 and 310 (recommended), other higher-level COSC courses with department permission in consultation with the Computer Science Department.

Minor—Geology 17

Required Courses:

GEOS 121	Physical Geology	3sh
GEOS 122	Physical Geology Laboratory	1sh
GEOS 131	Historical Geology	3sh
GEOS 132	Historical Geology Laboratory	1sh
Three upper-level (300 or higher) courses in Geology		9sh

Bachelor of Science—Environmental Geoscience

Liberal Studies: As outlined in Liberal Studies section 56-57
with the following specifications:
Mathematics: MATH 121 or 123
Natural Science: CHEM 111-112 or CHEM 113-114
Liberal Studies Electives: MATH 122 or 124, no courses with GEOS prefix

Major: 29
Required Courses:

GEOS 121-122	Physical Geology and Lab	4sh
GEOS 131-132	Historical Geology and Lab	4sh
GEOS 310	Environmental Geology	3sh
GEOS 320	Igneous and Metamorphic Petrology	3sh
GEOS 321	Mineralogy	3sh
GEOS 325	Structural Geology	3sh
GEOS 331	Hydrogeology	3sh
GEOS 332	Geochemistry	3sh
GEOS 380	Research Methods in Geoscience	2sh
GEOS 480	Geoscience Seminar	1sh

Other Requirements: 23-30
Biology Sequence:

BIOL 111	Principles of Biology I	4sh
BIOL 250	Principles of Microbiology	3sh

Chemistry Sequence:		
CHEM 231	Organic Chemistry I	4sh
CHEM 323	Analytical Methods	4sh
Controlled Electives:		8-9 sh
BIOL 112, 272, 321, 362, CHEM 322, 341, COSC 110, 250, 310, GEOG 314, 343, 415, 417, GEOS 326, 327, 411, 412, 432, 440 PHYS 111-121 (1), PHYS 112-122 One summer field course from: GEOS 331, 336, 337, or 338		
Foreign Language Intermediate Level (2,3)		0-6sh
Free Electives:		8-16
Total Degree Requirements:		124

(1) Students who plan to pursue an advanced degree in environmental geoscience are strongly advised to take the physics sequence as their controlled electives.

(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.

(3) 6sh of computer languages substitute for the foreign language requirement; COSC 110 and 310 (recommended), or other higher-level COSC courses with department permission in consultation with the Computer Science Department.

Bachelor of Science in Education—Earth and Space Science (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 55-56
Mathematics: MATH 121
Natural Science: CHEM 111-112
Social Science: PSYC 101
Liberal Studies Electives: BTED/COSC/IFMG 101, PHYS 111, no courses with GEOS prefix

College:			30
Professional Education Sequence: (1)			
COMM 103	Digital Instructional Technology	3sh	
EDUC 242	Pre-student Teaching Clinical Experience I	1sh	
EDUC 342	Pre-student Teaching Clinical Experience II	1sh	
EDUC 451	Teaching Science in the Secondary School	3sh	
EDUC 441	Student Teaching	12sh	
EDUC 442	School Law	1sh	
EDSP 102	Educational Psychology	3sh	
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh	
FDED 102	American Ed in Theory and Practice	3sh	
Major:			39
Required Courses:			
BIOL 103	General Biology I	4sh	
GEOS 121	Physical Geology	3sh	
GEOS 122	Physical Geology Laboratory	1sh	
GEOS 131	Historical Geology	3sh	
GEOS 132	Historical Geology Laboratory	1sh	
GEOS 341	Solar System	3sh	
GEOS 342	Stellar Astronomy	3sh	
GEOS 350	Operation of the Planetarium	1sh	
GEOS 361	Physical Oceanography	3sh	
GEOS 371	Meteorology I	3sh	
PHYS 112	Physics II Lecture	3sh	
PHYS 121	Physics I Lab	1sh	
PHYS 122	Physics II Lab	1sh	
Controlled Electives:			
Geology electives (not GEOS 101, 103, 105, 111, 113, 141)		9sh	
Other Requirements:			0
Free Electives:			0
Total Degree Requirements:			124-125

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.

(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EDEX 301 (2sh).

Bachelor of Science in Education—General Science Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 55-56
Mathematics: MATH 121 (1)
Natural Sciences: CHEM 111-112
Social Sciences: PSYC 101
Liberal Studies Electives: BTED/COSC/IFMG 101, no courses with prefix of chosen track in major

College:			30
Professional Education Sequence (1)			
COMM 103	Digital Instructional Technology	3sh	
EDSP 102	Educational Psychology	3sh	
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh	
EDUC 242	Pre-student Teaching Clinical Experience I	1sh	
EDUC 342	Pre-student Teaching Clinical Experience II	1sh	
EDUC 441	Student Teaching	12sh	
EDUC 442	School Law	1sh	
EDUC 451	Teaching Science in the Secondary School	3sh	
FDED 102	American Education in Theory and Practice	3sh	
Major:			39-40
Required Courses:			
BIOL 103	General Biology I	4sh	
BIOL 104	General Biology II	4sh	
GEOS 111	Earth Science for Educators I	3sh	
GEOS 112	Earth Science for Educators I Lab	1sh	
GEOS 113	Earth Science for Educators II	3sh	
GEOS 114	Earth Science for Educators II Lab	1sh	
PHYS 111	Physics I Lecture	3sh	
PHYS 112	Physics II Lecture	3sh	
PHYS 121	Physics I Lab	1sh	
PHYS 122	Physics II Lab	1sh	
Controlled Electives:			15-16sh
Biology track: BIOL 210, 220, 250, 272, 480, BIOL elective			
Chemistry track: CHEM 231, 321, 351, 232, or 340 or 341			
Geoscience track: GEOS 121, 123, 131, 341 or 342, 361, 371			
Physics track: PHYS 222, 231, 242, 331, 350 (2)			
Other Requirements:			0
Free Electives:			0
(#) Total Degree Requirements:			124-126

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.

(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EDEX 301 (2sh).

(2) Note: If Physics track is elected, MATH 123 and 124 are required.

(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Department of Mathematics

Gerald M. Buriok, Chairperson; Adkins, Alarcon, Anderson, Baker, Balenovich, Bertness, Bosse, Broughton, Burkett, Donley, Dubovsky, Early, Enderson, Feldman, Frank, Gorman, Maier, Massey, Mitchell, Morgan, Myers, Peterson, P. Ray, Reber, Sandbothe, Shawer, Steelman, Stempien, Stoudt, Walker, Zhang; and professors emeriti Angelo, Arms, Duncan, Gibson, Hartman, Hoyt, D. McBride, R. McBride, Morrell, Mueller, Oakes, Rettig, E. Smith, W. Smith, Stilwell, Willison, Woodard

Website: *http://www.iup.edu/math*

The Department of Mathematics prepares students for work in industry, graduate school mathematics, and teaching. Degrees offered by the department are the Bachelor of Science in Mathematics, the Bachelor of Science in Applied Mathematics, and the Bachelor of Science in Education with a major in Mathematics Education. The first two degree programs are offered within the College of Natural Sciences and Mathematics, and the third is in conjunction with the College of Education and Educational Technology. The department also offers a minor in Mathematics and a minor in Applied Statistics.

The program for a mathematics major in the College of Natural Sciences and Mathematics is two-phased. A student may pursue a degree in Applied Mathematics or Mathematics. Those completing a degree in Mathematics will be prepared to continue their studies in mathematics in graduate school, though some may enter business, industry, or government service. Those students receiving a degree in Applied Mathematics will be primarily prepared to enter business, industry, or government service in an area where mathematics or computer science is used or to continue their studies in applied mathematics or computer science in graduate school. This student would not be expected to continue graduate studies in pure mathematics.

The department shares in a joint degree with the Economics Department. Students with ability and interest in economics discover that a solid background in mathematics is an essential prerequisite for advanced theoretical and applied work in the discipline. Similarly, students with talent and interest in mathematics find economics an excellent field in which to employ their skills and knowledge. The Bachelor of Arts in Mathematics/Economics allows students to combine these complementary subjects in a joint degree program administered cooperatively by the departments of Mathematics and Economics. Enrolled students will be assigned an advisor in each department.

Those completing the program will have an exceptional background for graduate study in economics and such related fields as business, public policy, or operations research. They also will be ideally prepared to fill a wide variety of technical and quantitative positions in both government and private industry.

The program leading to the B.S. in Education with a major in Mathematics Education prepares the student for teaching mathematics in junior or senior high school. Many graduates, however, continue their formal education in mathematics at the graduate level or work in government or industry.

Elementary education majors may elect to take a concentration of at least 15 semester hours in mathematics. The program of courses for this concentration in mathematics is as follows: in addition to MATH 151 and 152, select 9 semester hours from the following courses: MATH 317, 420, 456, 457, 458, 459, 471, or 481.

Minor in Mathematics

The minor in Mathematics consists of a minimum of 17 semester hours in mathematics. The minor in Mathematics may offer preparation for advanced study in areas such as Economics, Computer Science, Physics, and other natural sciences. Any student who is required to take a year of calculus should consider this minor.

Minor in Applied Statistics

The minor in Applied Statistics, consisting of 16 semester hours, may be of interest to students who are required to take a calculus course and a course in probability and statistics. This includes, but is not limited to, students in the Eberly College of Business and Information Technology, Safety Science majors, and Computer Science majors.

A cumulative GPA of at least 2.0 in MATH courses is required for a minor in Mathematics or Applied Statistics. The Mathematics Department will not certify a minor for a transfer student unless at least two of the courses counting for the minor have been completed in the IUP Mathematics Department.

Bachelor of Science—Applied Mathematics

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			**50-52**
Mathematics: (included in major)			
Liberal Studies Electives: no courses with MATH prefix			
Major:			**40-41**
Required Courses:			
MATH 123	Calculus I for Physics, Chemistry, and Mathematics	4sh	
MATH 124	Calculus II for Physics, Chemistry, and Mathematics	4sh	
MATH 171	Introduction to Linear Algebra	3sh	
MATH 216	Probability and Statistics for Natural Sci	4sh	
MATH 241	Differential Equations	3sh	
MATH 271	Introduction to Mathematical Proofs I	3sh	
MATH 272	Introduction to Mathematical Proofs II	3sh	
MATH 480	Senior Seminar	1sh	
Controlled Electives: (1)			
Two courses from list: MATH 371, 421, 422, 423, 424, 427, 476, 477		6sh	
One of the following two-course sequences: MATH 342/COSC 450 or COSC 451 or MATH 451; MATH 363-364; MATH 445-446		6-7sh	
A minimum of 3 additional sh from the list of controlled electives above or the following: MATH 353, 425, 447, 465, 481		3sh	
Other Requirements:			**6-12**
Computer Science:			
COSC 110	Problem Solving and Structured Programming	3sh	
COSC 250	Introduction to Numerical Methods	3sh	
Foreign Language Intermediate Level (2)		0-6sh	
Free Electives:			**19-28**
Total Degree Requirements:			**124**

(1) A student may select courses to fulfill requirements for specialized track.
   a. Actuarial/Statistics: MATH 363, 364, 366, 371, 421, 446, 465
   b. Math Analyst/Engineering: MATH 342/COSC 450, COSC 451, MATH 371, 423, 447, 451
   c. Operations Research: MATH 371, 421, 445/446, 447

(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Mathematics

Liberal Studies: As outlined in Liberal Studies section with the following specifications:			**50-52**
Mathematics: (included in major)			
Liberal Studies Electives: no courses with MATH prefix			
Major:			**40-41**
Required Courses:			
MATH 123	Calculus I for Physics, Chemistry, and Mathematics	4sh	
MATH 124	Calculus II for Physics, Chemistry, and Mathematics	4sh	
MATH 171	Introduction to Linear Algebra	3sh	
MATH 216	Probability and Statistics for Natural Sci	4sh	
MATH 241	Differential Equations	3sh	
MATH 271	Introduction to Mathematical Proofs I	3sh	
MATH 272	Introduction to Mathematical Proofs II	3sh	
MATH 480	Senior Seminar	1sh	
Controlled Electives:			
Four courses from list: MATH 371, 421, 422, 423, 424, 427, 476, 477		12sh	

A minimum of 3 additional sh from the list of controlled electives above or the following:
MATH 342, 350, 353, 355, 363, 364, 425, 445, 446, 447, 465, 481 3-4sh

Other Requirements: 3-9
Computer Science:
COSC 110 Problem Solving and Structured Programming 3sh
Foreign Language Intermediate Level (1) 0-6sh

Free Electives: 22-31

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Arts—Economics/Mathematics

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 47-49
Social Science: ECON 121 (included in major)
Mathematics: MATH 123 (included in major)
Electives: Intermediate foreign language, no course with ECON or MATH prefix.

Major: 53-55
Core:
ECON 121 Principles of Economics I 3sh
ECON 122 Principles of Economics II 3sh
ECON 421 Macroeconomics Analysis 3sh
ECON 422 Microeconomics Analysis 3sh
MATH 123 Calculus I for Physics, Chemistry, and Mathematics 4sh
MATH 124 Calculus II for Physics, Chemistry, and Mathematics 4sh
MATH 171 Introduction to Linear Algebra 3sh
MATH 216 *or* ECON 355 Probability and Statistics for Natural Sci or Statistics for Economics 3-4sh
Economics Electives: 12sh
Students are especially encouraged to take ECON 334 and 356, but any course except ECON 101 may be used. ECON 493 may be counted only with the approval of the program coordinator and only up to 6sh.
Mathematics Electives: 15-16sh
At least one of the following two-semester sequences:
MATH 241 and 371, MATH 363 and 364, MATH 445 and 446
Three additional courses either from the above or from the following:
MATH 271, 272, 342, 417 or 418, 421, 422, 423, 425, 427, 451, 465, 476, 477

Other Requirements: 0

Free Electives: 20-24

Total Degree Requirements: 124

Bachelor of Science in Education—Mathematics Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 50-52
Mathematics: (included in major)
Social Science: PSYC 101
Liberal Studies Electives: no courses with MATH prefix

College: 29
Professional Education Sequence:
EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings 2sh
EDSP 102 Educational Psychology 3sh
EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3sh
EDUC 242 Pre-student Teaching Clinical Experience I 1sh
EDUC 342 Pre-student Teaching Clinical Experience II 1sh
EDUC 441 Student Teaching 12sh
EDUC 442 School Law 1sh
EDUC 456 Teaching Math in the Secondary Schools 3sh
FDED 102 American Ed in Theory and Practice 3sh

Major: 38
Required Courses:
MATH 117 Principles of Math 3sh
MATH 123 Calculus I for Physics, Chemistry, and Mathematics 4sh
MATH 124 Calculus II for Physics, Chemistry, and Mathematics 4sh
MATH 171 Introduction to Linear Algebra 3sh
MATH 216 Probability and Statistics for Natural Sci 4sh
MATH 271 Introduction to Mathematical Proofs I 3sh
MATH 272 Introduction to Mathematical Proofs II 3sh
MATH 353 Theory of Numbers 3sh
MATH 355 Foundations of Geometry I 3sh
MATH 350 History of Mathematics 3sh
MATH 460 Technology in Mathematics Instruction 3sh
Two of the following:
MATH 152/453/454/455 Math Seminar 2sh

Other Requirements: 3
COSC 205 Programming Languages for Secondary Education 3sh

Free Electives: 2-4

Total Degree Requirements: 124

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.

Minor—Applied Statistics 16

At least 16sh selected as follows:
a) Introductory calculus course: MATH 115 or 121 or 123
b) Introductory statistics course: MATH 214 or 216 or 217
c) MATH 417
d) MATH 418

The remaining hours may be chosen from the following:
a) A second calculus course: MATH 122 or 124
b) MATH 171
c) QBUS 215
d) Any course for mathematics majors approved by the Applied Statistics Advisor.

Minor—Mathematics 17

Required Courses: 17sh
MATH 121 and 122 or MATH 123 and 124
Controlled Electives: 9sh (1)
Other courses for math majors, MATH 216 and 219 may be included

(1) The following courses are excluded: MATH 100, 101, 102, 110, 117, 214, 217, 417, 418, and courses for the elementary education concentration in mathematics.

Natural Science

Andrew C. Browe, Coordinator

Website: *http://www.iup.edu/natsciandmath*

The program leading to the Bachelor of Science degree in Natural Science is designed to prepare students for early admission to professional schools–optometry, podiatry, chiropractic, physical therapy, pharmacy, and dentistry. Another track prepares students for further study in engineering. The B.S. degree in Natural Science will be earned by students who transfer to professional schools that have an articulation agreement with IUP. In some cases, students interested in obtaining a four-year baccalaureate degree before entering a medical or professional school should enroll in a program of studies leading to a B.A. or B.S. degree in the departments of Biology or Chemistry. Students considering a professional career in a high-technology business or industry may wish to obtain a foundation in the Natural Sciences while using their free electives to pursue additional work in areas such as Economics, Pre-Law, or a minor in Business Administration. The B.S. in Natural Science may not be used for a second major or a second degree by majors in the College of Natural Sciences and Mathematics. For further information about these programs, contact the coordinator of the Natural Science Program.

Bachelor of Science—Natural Science

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **43-44**
Mathematics: included in major
Natural Science: included in major
Liberal Studies Electives: no courses with SCI prefix
Synthesis: not required for three-year students who transfer to a professional school with an articulation agreement
Writing Intensive: one course required for three-year students who transfer to a professional school with an articulation agreement

Major: **44-46**
Controlled Electives: (*)

BIOL courses	8sh
CHEM courses	8sh
PHYS courses	8sh
MATH courses	7-8sh
Computer science and/or advanced courses in Biology, Chemistry, Mathematics, or Physics	13-14sh

Other Requirements: **0-9**

Foreign Language Intermediate Level (1)		0-6sh
COSC 101	Microbased Computer Literacy (2)	0-3sh

Free Electives: **25-37**

Total Degree Requirements: **124**

(*) Preprofessional advisors will outline the courses required for admission to a professional school.
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Not required for tracks which include COSC 110 or 250; may also be included in Liberal Studies electives.

Bachelor of Science—Natural Science/Pre-Chiropractic Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **52-55**
Mathematics: MATH 121
Natural Science: CHEM 111-112
Social Sciences: PSYC 101, non-Western course
Liberal Studies Electives: COSC 101, MATH 217, no courses with SCI prefix
Synthesis: not required for three-year students who transfer to a professional school with an articulation agreement
Writing Intensive: one course required for three-year students who transfer to a professional school with an articulation agreement

Major: **37**
Required Courses:

BIOL 111	Principles of Biology I	4sh
BIOL 112	Principles of Biology II	4sh
BIOL 150	Human Anatomy	3sh
BIOL 151	Human Physiology	4sh
BIOL 241	General Microbiology	3sh
CHEM 231	Organic Chemistry I	4sh
CHEM 232	Organic Chemistry II	4sh
PHYS 111	Physics I Lecture	3sh
PHYS 121	Physics I Lab	1sh
PHYS 112	Physics II Lecture	3sh
PHYS 122	Physics II Lab	1sh
PSYC 101	General Psychology	3sh

Other Requirements: **4-6**
Foreign Language Intermediate Level (1)
Free Electives:
Electives to meet minimum of 90 IUP sh and minimum of 24sh in Humanities and Social Sciences for admission to New York Chiropractic College
Maximum credits for work at New York Chiropractic College 34sh

Total Degree Requirements: **131**

(*) Accelerated three-year New York Chiropractic College (NYCC) program: students are admitted to the NYCC accelerated program only as incoming freshmen. A maximum of 35sh of work may be transferred after the first year at NYCC. Upon the completion of the first year of studies at NYCC, a transcript from NYCC is to be sent by the student to the dean of the College of Natural Sciences and Mathematics with a note requesting application materials for graduation.
(1) 3 or 4 sh of Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Natural Science/Pre-Dentistry Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **52-55**
Mathematics: MATH 121
Natural Science: CHEM 111-112
Social Sciences: PSYC 101, non-Western course
Liberal Studies Electives: COSC 101, MATH 216 or 217, PHYS 111
Synthesis: one course
Writing Intensive: two courses, at least one in College of Natural Sciences and Mathematics

Major: **31**
Required Courses:

BIOL 111	Principles of Biology I	4sh
BIOL 112	Principles of Biology II	4sh
BIOL 150	Human Anatomy	3sh
BIOL 151	Human Physiology	4sh
BIOL 241	General Microbiology	3sh
CHEM 231	Organic Chemistry I	4sh
CHEM 232	Organic Chemistry II	4sh
PHYS 121	Physics I Lab	1sh
PHYS 112	Physics II Lecture	3sh
PHYS 122	Physics II Lab	1sh

Other Requirements: **4-8**
Foreign Language Intermediate Level

Free Electives: **29-34 (1)**

Total Degree Requirements: **124**

(1) Student is to work with his/her advisor to select appropriate free electives for professional school. Biochemistry and Ceramics are highly recommended courses.

Bachelor of Science—Natural Science/Pre-Engineering Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53
Mathematics: MATH 129
Humanities/Philosophy and Religious Studies: PH222
Natural Science: CHEM 111-112
Social Sciences: ECON 121, PLSC 101 or 111
Liberal Studies Electives: MATH 124, no courses with SCI prefix
Synthesis: not required for three-year students
Writing Intensive: one course required for three-year students

Major: 33-35
Required Courses:

COSC 110	Problem Solving and Structured Programming	3sh
COSC 250	Introduction to Numerical Methods	3sh
MATH 171	Introduction to Linear Algebra	3sh
MATH 241	Differential Equations	3sh
MATH 342	Advanced Mathematics for Applications	4sh
PHYS 131	Physics I-C Lecture	3sh
PHYS 132	Physics II-C Lecture	3sh
PHYS 141	Physics I-C Lab (or PHYS 121 Lab)	1sh
PHYS 142	Physics II-C Lab	1sh
PHYS 331	Modern Physics (2)	3sh

Controlled Electives: One package, depending on program

Chemical Engineering:

CHEM 231	Organic Chemistry I	4sh
CHEM 232	Organic Chemistry II	4sh

Civil Engineering:

MATH 216	Probability and Statistics for Natural Sci	4sh
-	Technical elective	3-4sh

Electrical Engineering:

MATH 216	Probability and Statistics for Natural Sci	4sh
-	Technical elective	3-4sh

Industrial Engineering:

MATH 216	Probability and Statistics for Natural Sci	4sh
-	Technical elective	3-4sh

Materials Science and Engineering:

CHEM 231	Organic Chemistry I	4sh
CHEM 232	Organic Chemistry II	4sh

Mechanical Engineering:

-	Technical electives	6-8sh

Other Requirements: 0-6
Foreign Language Intermediate Level (1)

Free Electives: 9

Other Requirements: about 64
Two years at University of Pittsburgh School of Engineering (2) (3)

(#)Total Degree Requirements: 159-161

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) A 2.8 cumulative GPA is required for transfer to the University of Pittsburgh.
(3) For curriculum information about the cooperative program in engineering with Drexel University, refer to the catalog section for the Physics Department.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Bachelor of Science—Natural Science/Pre-Optometry Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 52-55
Mathematics: MATH 121
Natural Science: CHEM 111-112
Social Sciences: ECON 101, PSYC 101, non-Western course
Liberal Studies Electives: MATH 216 or 217, COSC 101, no courses with SCI prefix
Synthesis: not required for three-year students who transfer to a professional school with an articulation agreement
Writing Intensive: one course required for three-year students who transfer to a professional school with an articulation agreement

Major: 38
Required Courses:

BIOL 111	Principles of Biology I	4sh
BIOL 112	Principles of Biology II	4sh
BIOL 150	Human Anatomy	3sh
BIOL 151	Human Physiology	4sh
BIOL 241	General Microbiology	3sh
CHEM 231	Organic Chemistry I	4sh
CHEM 232	Organic Chemistry II	4sh
CHEM 351	Biochemistry	4sh
PHYS 111	Physics I Lecture	3sh
PHYS 121	Physics I Lab	1sh
PHYS 112	Physics II Lecture	3sh
PHYS 122	Physics II Lab	1sh

Other Requirements: 0-7
Foreign Language Intermediate Level (1)
MATH 122 Calculus II for Business, Natural, and Social Sciences 4sh (2)

Free Electives: 29-39
Electives to meet minimum of 90 IUP sh 0-3sh (3)
Credits from work at Pennsylvania College of Optometry 34sh

Total Degree Requirements: 124

(*) Accelerated three-year Pennsylvania College of Optometry (PCO) program: students are admitted to the PCO accelerated program only as incoming freshmen. A maximum of 34sh of work may be transferred after the first year at PCO. Upon the completion of the first year of studies at PCO, a transcript from PCO is to be sent by the student to the dean of the College of Natural Sciences and Mathematics with a note requesting application materials for graduation.
(1) 3 or 4 sh of Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Required for many schools of optometry; recommended for PCO.
(3) Additional electives if needed to meet minimum of 90 IUP sh should be selected from the following suggestions: BIOL 112 and 263.

Bachelor of Science—Natural Science/Pre-Physical Therapy Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 52-55
Mathematics: MATH 121
Natural Science: CHEM 111-112
Social Sciences: PSYC 101, non-Western course
Liberal Studies Electives: COSC 101, MATH 217, no courses with SCI prefix
Synthesis: one course
Writing Intensive: two courses, at least one in College of Natural Sciences and Mathematics

Major: 34
Required Courses:

BIOL 111	Principles of Biology I	4sh
BIOL 112	Principles of Biology II	4sh
BIOL 150	Human Anatomy	3sh
BIOL 151	Human Physiology	4sh
CHEM 231	Organic Chemistry I	4sh
CHEM 351	Biochemistry	4sh
PHYS 111	Physics I Lecture	3sh
PHYS 121	Physics I Lab	1sh
PHYS 112	Physics II Lecture	3sh
PHYS 122	Physics II Lab	1sh
PSYCH 101	General Psychology	3sh

Other Requirements:	4-8
Foreign Language Intermediate Level	
Free Electives:	32-37 (1)
Total Degree Requirements:	124

(1) A student should work with his/her advisor to select appropriate free electives for professional school.

Bachelor of Science—Natural Science/Pre-Podiatry Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 52-55
Mathematics: MATH 121
Natural Science: CHEM 111-112
Social Sciences: PSYC 101, non-Western course
Liberal Studies Electives: COSC 101, MATH 217, PHYS 111
Synthesis: not required for three-year students who transfer to a professional school with an articulation agreement
Writing Intensive: one course required for three-year students who transfer to a professional school with an articulation agreement

Major: 31-34

Required Courses:

BIOL 111	Principles of Biology I	4sh
BIOL 112	Principles of Biology II	4sh
BIOL 263	Genetics	3sh
CHEM 231	Organic Chemistry I	4sh
CHEM 232	Organic Chemistry II	4sh
CHEM 351	Biochemistry	4sh
PHYS 112	Physics II Lecture	3sh
PHYS 121	Physics I Lab	1sh
PHYS 122	Physics II Lab	1sh

Controlled Electives:
Biology electives 3-6sh

Other Requirements: 4-6
Foreign Language Intermediate Level

Free Electives:
Electives to meet minimum of ninety IUP credits
Credits from work at Temple University College of Podiatric Medicine 34sh

Total Degree Requirements: 124

Department of Physics

Richard D. Roberts, Chairperson; Abu El-Haija, Freeman, Gaggini, Giniewicz, Hershman, Karimi, Matolyak, Numan, Ramsey, Sobolewski, Talwar, Whitson, Wijekumar; and professors emeriti Berry, Buckwalter, Fox, Matous, McNamara, Riban, Waddell

Website: *http://www.iup.edu/physics*

The goal of the Department of Physics is to prepare fully qualified individuals for productive careers in physics. Five degrees are offered within the College of Natural Sciences and Mathematics: the Bachelor of Science in Physics, the Bachelor of Arts in Physics, the Bachelor of Science in Applied Physics, the Associate in Applied Science in Electro-Optics, and the Associate in Science in Electro-Optics. The first three programs offer very good preparation for graduate study in physics or for research in industrial technology. The applied physics degree provides a strong technical background for work in solid-state electronics or electro-optics or for interdisciplinary research in the areas of computer science, chemistry, biology, and geology. A Bachelor of Science degree in Education with a major in Physics is also offered. A two-year pre-engineering program is offered in cooperation with Drexel University wherein students transfer to Drexel after two years. The department also offers a minor in Physics, as well as general science courses that satisfy the Natural Science requirements of the Liberal Studies program.

The two associate degrees in Electro-Optics, Associate in Applied Science in Electro-Optics (A.A.S.E.O.) and Associate in Science in Electro-Optics (A.S.E.O.) are designed to produce trained and skilled workers that will move into senior technician slots in the electro-optics industry, both locally and nationally. With the A.S.E.O. degree the student has a choice of either going directly to work or matriculating at the IUP main campus in the Electro-Optics track in Applied Physics. The two associate degrees, A.A.S.E.O and A.S.E.O., are offered at the Armstrong Branch Campus of IUP.

Minor in Physics

To minor in Physics, a student must successfully complete 15 semester hours in Physics which must consist of at least three courses at the 200 level or higher.

Cooperative Pre-Engineering (Chemical, Civil, Electrical, Materials, Mechanical) Program with Drexel University

Common to all pre-engineering programs are the following science and mathematics requirements: *PHYS 131-141, PHYS 132-142, PHYS 322, PHYS 342, *MATH 123, *MATH 124, MATH 171, MATH 241, *CHEM 111, *CHEM 112 (*or appropriate substitute).

Further requirements depend on the particular engineering program chosen. Complete information regarding a specific program may be obtained from the physics department.

For information on the Cooperative Pre-Engineering program with the University of Pittsburgh, see the catalog section for Natural Science and the program outline for "Bachelor of Science in Natural Science/Pre-Engineering."

Bachelor of Arts—Physics

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 56-57
Mathematics: MATH 123
Natural Science: PHYS 131-141 and 132-142
Liberal Studies Electives: MATH 124, no courses with PHYS prefix

Major: 28

Required Courses:

PHYS 131	Physics I-C Lecture	*sh (1)
PHYS 132	Physics II-C Lecture	*sh (1)
PHYS 141	Physics I-C Lab	*sh (1)
PHYS 142	Physics II-C Lab	*sh (1)
PHYS 222	Mechanics I	2sh
PHYS 223	Mechanics II	2sh
PHYS 231	Electronics	4sh
PHYS 322	Electricity and Magnetism I	2sh
PHYS 323	Electricity and Magnetism II	2sh
PHYS 331	Modern Physics	3sh
PHYS 350	Intermediate Experimental Physics I	3sh
PHYS 351	Intermediate Experimental Physics II	3sh
PHYS 473	Quantum Mechanics I	4sh

Controlled Electives:
One additional PHYS majors course 3sh

Other Requirements: 22-28
Additional mathematics and computer science:

COSC 110	Problem Solving and Structured Programming	3sh
MATH 241	Differential Equations	3sh
MATH 342	Advanced Mathematics for Applications	4sh

Additional natural science sequence 6sh
Additional social or natural science sequence (advanced) 6sh
Foreign Language Intermediate Level (2) 0-6sh

Free Electives: 11-18

Total Degree Requirements: 124

(1) Semester hours are counted in the Liberal Studies Natural Science Requirement
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Physics

Liberal Studies: As outlined in Liberal Studies section with the following specifications: — **56-57**
Mathematics: MATH 123
Natural Science: PHYS 131-141 and 132-142
Liberal Studies Electives: MATH 124, no courses with PHYS prefix

Major: — **37**
Required Courses:

PHYS 131	Physics I-C Lecture	*sh (1)
PHYS 132	Physics II-C Lecture	*sh (1)
PHYS 141	Physics I-C Lab	*sh (1)
PHYS 142	Physics II-C Lab	*sh (1)
PHYS 222	Mechanics I	2sh
PHYS 223	Mechanics II	2sh
PHYS 231	Electronics	4sh
PHYS 242	Optics	3sh
PHYS 322	Electricity and Magnetism I	2sh
PHYS 323	Electricity and Magnetism II	2sh
PHYS 331	Modern Physics	3sh
PHYS 342	Thermal and Statistical Physics	3sh
PHYS 350	Intermediate Experimental Physics I	3sh
PHYS 351	Intermediate Experimental Physics II	3sh
PHYS 473	Quantum Mechanics I	4sh

Controlled Electives:

One course from list: PHYS 472 or 490	3sh
One additional PHYS majors course	3sh

Other Requirements: — **13-19**

COSC 110	Problem Solving and Structured Programming	3sh
MATH 241	Differential Equations	3sh
MATH 342	Advanced Mathematics for Applications	4sh
One from list: COSC 250; MATH 171, 363, 421, 423		3sh
Foreign Language Intermediate Level (2)		0-6sh

Free Electives: — **11-18**

Total Degree Requirements: — **124**

(1) Semester hours are counted in the Liberal Studies Natural Science Requirement
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Applied Physics

Liberal Studies: As outlined in Liberal Studies section with the following specifications: — **56-57**
Mathematics: MATH 123
Natural Science: CHEM 111-112 (replaced by CHEM 113-114 for Chemistry track)
Liberal Studies Electives: MATH 124, no courses with PHYS prefix

Major: — **28**
Required Courses:

PHYS 131	Physics I-C Lecture	3sh
PHYS 132	Physics II-C Lecture	3sh
PHYS 141	Physics I-C Lab	1sh
PHYS 142	Physics II-C Lab	1sh
PHYS 222	Mechanics I	2sh
PHYS 231	Electronics	4sh
PHYS 242	Optics	3sh
PHYS 322	Electricity and Magnetism I	2sh
PHYS 331	Modern Physics	3sh
PHYS 352	Applied Physics Laboratory	3sh
PHYS 355	Computer Interfacing	3sh

Other Requirements: — **9-15**

MATH 241	Differential Equations	3sh
COSC 110	Problem Solving and Structured Programming	3sh
COSC 250	Introduction to Numerical Methods	3sh
Foreign Language Intermediate Level (1)		0-6sh

Controlled Electives: According to Track — **23-27**

Solid State Electronics Track: COSC 300, MATH 342, PHYS 323, 342, 353, 432, 475, 476	24 sh
Computer Science Track: COSC 300, 310, 410, 450, PHYS 342, 353, 432, 475, 476	27 sh
Chemistry Track: CHEM 231, 232, 323, 341, 342, 343, MATH 342	24 sh
Biology Track: BIOL 111, 120, CHEM 231, 323, 351, Two biology electives from the following: BIOL 250, 263, 350, 401, 472	27 sh
Geology Track: GEOS 121, 122, 131, 132 Five Geoscience electives from the following: GEOS 321, 325, 326, 362, 412, 440, 481	23 sh

Free Electives: — **3-8**

Total Degree Requirements: — **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science in Education—Physics (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: — **56-57**
Mathematics: MATH 123
Natural Science: CHEM 111-112
Social Sciences: PSYC 101
Liberal Studies Electives: MATH 241; BIOL 103; GEOS 110, 121, 141, or 221; no courses with PHYS prefix

College: — **30**
Professional Education Sequence (1)

COMM 103	Digital Instructional Technology	3sh
EDUC 242	Pre-student Teaching Clinical Exp I	1sh
EDUC 342	Pre-student Teaching Clinical Exp II	1sh
EDUC 441	Student Teaching	12sh
EDUC 442	School Law	1sh
EDUC 451	Teaching Science in the Secondary School	3sh
EDSP 102	Educational Psychology	3sh
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3sh
FDED 102	American Ed in Theory and Practice	3sh

Major: — **32**
Required Courses:

PHYS 131	Physics I-C Lecture	3sh
PHYS 132	Physics II-C Lecture	3sh
PHYS 141	Physics I-C Lab	1sh
PHYS 142	Physics II-C Lab	1sh
PHYS 222	Mechanics I	2sh
PHYS 223	Mechanics II	2sh
PHYS 231	Electronics	4sh
PHYS 242	Optics	3sh
PHYS 322	Electricity and Magnetism I	2sh
PHYS 331	Modern Physics	3sh
PHYS 342	Thermal and Statistical Physics	3sh
PHYS 350	Intermediate Experimental Physics I	3sh

Controlled Electives:

Physics electives	2sh

Other Requirements: — **8**
Additional Math Courses:

MATH 124	Calculus II for Physics, Chemistry, and Mathematics	4sh
MATH 342	Advanced Mathematics for Applications	4sh

Free Electives: — **0**

(#)Total Degree Requirements: — **126-127**

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EDEX 301 (2sh).
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Associate in Applied Science—Electro-Optics (A.A.S.E.O.) (@)

Liberal Studies: The following are the required Liberal Studies courses: **23-24**
English Composition: ENGL 101
Mathematics: MATH 110 or 121
Humanities: 3sh
Natural Sciences: CHEM 111
Social Sciences: 3sh
Liberal Studies Electives: SAFE 145, COSC/BEDU/IFMG 101 or COSC/BEDU/COMM/IFMG 201

Major: **37**
Required Courses:

EOPT 105	Computer Interfacing in Electro-Optics	3sh
EOPT 110	Geometric Optics	3sh
EOPT 120	Wave Optics	3sh
EOPT 125	Introduction to Electronics	4sh
EOPT 210	Detection and Measurement	3sh
EOPT 220	Introduction to Lasers	3sh
EOPT 240	Fiber Optics	3sh
EOPT 250	High Vacuum Technology	3sh
EOPT 260	Industrial Applications of Lasers	3sh
PHYS 100	Prelude to Physics	3sh
PHYS 115	Physics I for Electro-Optics	3sh
PHYS 116	Physics II for Electro-Optics	3sh

Other Requirements: **3**

MGMT 234	Introduction to Quality Control	3sh

Total Degree Requirements: **63-64**

@ New program and courses pending Council of Trustees and State System of Higher Education approval.

Associate in Science—Electro-Optics (A.S.E.O.) (@)

Liberal Studies: The following are the required Liberal Studies courses: **30**
English Composition: ENGL 101
Mathematics: MATH 121
Humanities: 3sh
Fine Arts: 3sh
Natural Sciences: CHEM 111
Social Sciences: 3sh
Health/Wellness: 3sh
Liberal Studies Electives: SAFE 145, COSC/BEDU/IFMG 101 or COSC/BEDU/COMM/IFMG 201

Major: **34**
Required Courses:

EOPT 105	Computer Interfacing in Electro-Optics	3sh
EOPT 110	Geometric Optics	3sh
EOPT 120	Wave Optics	3sh
EOPT 125	Introduction to Electronics	4sh
PHYS 100	Prelude to Physics	3sh
PHYS 115	Physics I for Electro-Optics	3sh
PHYS 116	Physics II for Electro-Optics	3sh
Choose two of the following three:		
EOPT 210	Detection and Measurement	3sh
EOPT 220	Introduction to Lasers	3sh
MGMT 234	Introduction to Quality Control	3sh
Choose two of the following three:		
EOPT 240	Fiber Optics	3sh
EOPT 250	High Vacuum Technology	3sh
EOPT 260	Industrial Applications of Lasers	3sh

Total Degree Requirements: **64**

@ New program and courses pending Council of Trustees and State System of Higher Education approval.

Bachelor of Science—Applied Physics/Electro-Optics Track (@)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **56**
Mathematics: MATH 121
Natural Science: CHEM 111-112
Liberal Studies Electives: MATH 122, no course with PHYS prefix

Major: **44**
Required courses:

EOPT 105	Computer Interfacing in Electro-Optics	3sh
EOPT 110	Geometric Optics	3sh
EOPT 120	Wave Optics	3sh
EOPT 125	Introduction to Electronics	4sh
PHYS 100	Prelude to Physics	3sh
PHYS 115	Physics I for Electro-Optics	3sh
PHYS 116	Physics II for Electro-Optics	3sh
PHYS 222	Mechanics I	2sh
PHYS 322	Electricity and Magnetism I	2sh
PHYS 331	Modern Physics	3sh
PHYS 350	Intermediate Experimental Physics I	3sh
Choose two of the following three:		
EOPT 210	Detection and Measurement	3sh
EOPT 220	Introduction to Lasers	3sh
MGMT 234	Introduction to Quality Control	3sh
Choose two of the following three:		
EOPT 240	Fiber Optics	3sh
EOPT 250	High Vacuum Technology	3sh
EOPT 260	Industrial Applications of Lasers	3sh

Other Requirements: **15-21**

COSC/BEDU/IFMG 101 *or*		
COSC/BEDU/COMM/IFMG 201		3sh
COSC 110	Problem Solving and Structured Programming	3sh
COSC 250	Introduction to Numerical Methods	3sh
MATH 241	Differential Equations	3sh
SAFE 145	Workplace Safety Today and Tomorrow	3sh
Foreign Language-Intermediate Level (1)		0-6sh

Free Electives: **3-9**

Total Degree Requirements: **124**

(@) Program revision and EOPT courses pending Council of Trustees and State System of Higher Education approval.
(1) Intermediate-level Foreign Language may be included in Liberal Studies Electives and if it is, 6sh will be applied to Liberal Studies Electives and 0sh here.

Department of Psychology

Mary Lou Zanich, Chairperson; Berman, Federoff, Gallen, Goodwin, Grover, Hart, Husemits, Kaniasty, Laporte, Luo, Marquette, McHugh, Meil, Pavloski, Raell, Rittle, Robertson, Roehrich, Sadler, Stires, Thornton, Walz, Zimny; and professors emeriti Magee, Patton, Rich, Schneider

Website: *http://www.iup.edu/psychology*

The program in psychology leads to a Bachelor of Arts degree and is designed to give the student an understanding of the methods and major findings in the science of behavior and mental processes. The major offers the background required for graduate work in psychology and also preparation for such related fields as social work, personnel work, advertising, medicine, law, and theology. The department also offers a minor in psychology.

An honors program has been developed to enrich the education of qualified psychology majors and assist such students in gaining entrance to graduate school by providing classroom and research experiences which will prepare them for work at the graduate level.

A track in applied psychology offers students a firm background in the science of psychology, preparation for nonclinical applications of psychology to the solution of human and social problems in private and public organizations, and preparation for graduate study in the applied area of psychology. The core for the track is the same as for the psychology major;

coursework in applied psychology is provided by enrolling in appropriate psychology electives and a carefully designed concentration of courses outside the department.

All psychology majors are required to take a minor or a concentration in another discipline.

Bachelor of Arts—Psychology

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54-55**
Mathematics: MATH 217
Natural Science: BIOL 103-104 recommended
Social Science: PSYC 101
Liberal Studies Electives: BTED/COSC/IFMG 101, no courses with PSYC prefix

Major: **34-39**
Required Courses:

PSYC 290	Research Design and Analysis I	4sh
PSYC 291	Research Design and Analysis II	4sh

Controlled Electives:
A minimum of one course from each of these six core areas: (1)

A.	Developmental Psychology: PSYC 310, 311, 312, 315	3-4sh (2)
B.	Individual Differences: PSYC 320, 321, 325	3-4sh
C.	Social/Environmental: PSYC 330, 331, 335	3-4sh (3)
D.	Cognition/Learning: PSYC 340, 341, 342, 345	3-4sh (4)
E.	Biological Bases of Behavior: PSYC 350, 352, 355, 356	3-4sh (5)
F.	Metatheoretical Perspectives in Psychology: PSYC 410, 411	3sh

Other PSYC electives beyond PSYC 101 6-8sh

Other Requirements: **15-21**

Foreign Language Intermediate Level	0-6sh (6)
Minor/concentration:	15sh

Free Electives: **9-21**

Total Degree Requirements: **124**

(1) At least two must be content-based laboratory courses.
(2) Credit toward the major will be given for only one of PSYC 310, 311, or 315.
(3) Credit toward the major will be given for only one of PSYC 330 or 335.
(4) Credit toward the major will be given for only one of PSYC 342 or 345.
(5) Credit toward the major will be given for only one of PSYC 350 or 356.
(6) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Arts—Psychology/Applied Psychology Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **54-55**
Mathematics: MATH 217
Natural Science: BIOL 103-104 recommended
Social Science: PSYC 101, ECON 121
Liberal Studies Electives: BTED/COSC/IFMG 101, no courses with PSYC prefix

Major: **38-41**
Required Courses:

PSYC 290	Research Design and Analysis I	4sh
PSYC 291	Research Design and Analysis II	4sh
PSYC 421	Psychology of Work	3sh
PSYC 425	Experimental Organizational Psychology	4sh
PSYC 493	Psychology Practicum	3sh (1)

Controlled Electives:
A minimum of one course from each of these six core areas: (2)

A.	Developmental Psychology: PSYC 310, 311, 312, 315	3-4sh (3)
B.	Individual Differences: PSYC 320, 321, 325	3-4sh
C.	Social/Environmental: PSYC 330, 331, 335	3-4sh (4)
D.	Cognition/Learning: PSYC 340, 341, 342, 345	3-4sh (5)
E.	Biological Bases of Behavior: PSYC 350, 352, 355, 356	3-4sh (6)
F.	Metatheoretical Perspectives in Psychology: PSYC 410, 411	3sh

Other Requirements: **15-21**
Outside Concentration:

ECON 122	Principles of Economics II	3sh
ECON 330	Labor Economics	3sh
ILR480	Principles and Practices of Collective Bargaining	3sh

Two courses, as approved by advisor 6sh (7)
Foreign Language Intermediate Level 0-6sh (8)

Free Electives: **7-17**

Total Degree Requirements: **124**

(1) Department recommends at least 6sh of PSYC 493.
(2) At least two must be content-based laboratory courses.
(3) Credit toward the major will be given for only one of PSYC 310, 311, or 315.
(4) Credit toward the major will be given for only one of PSYC 330 or 335.
(5) Credit toward the major will be given for only one of PSYC 342 or 345.
(6) Credit toward the major will be given for only one of PSYC 350 or 356.
(7) Department highly recommends PSYC 424 and recommends one course from business or another applied area.
(8) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Minor—Psychology **20**

Required Courses:

PSYC 101	General Psychology	3sh (1)
PSYC 280	Psychological Inquiry or	3sh
PSYC 290	Research Design and Analysis I	4sh (2)

Four other PSYC electives beyond PSYC 101 12sh (3) (4)

(1) Meets Liberal Studies requirement.
(2) Prerequisite: MATH 217.
(3) Selected in consultation with the director of the undergraduate program.
(4) Credit toward minor will be given for only one of PSYC 310, 311, or 315.

Minor—Psychological Science **17-18**

Required Courses:

PSYC 101	General Psychology	3sh (1)
PSYC 290	Research Design and Analysis I	4sh (2)

One course from core areas A, B, or C 3-4sh (3)
One course from core areas D or E 3-4sh (3)
One PSYC elective 3-4sh

(1) Meets Liberal Studies requirement.
(2) Prerequisite: MATH 217.
(3) At least one course must be a content-based laboratory course.

School of Continuing Education

Nicholas E. Kolb, Associate Provost and Dean
George E. Rogers, Assistant Dean
Website: *www.iup.edu/continuing-ed*

The mission of the School of Continuing Education is to serve the lifelong educational needs of nontraditional students, working adults, professional organizations, local and state agencies, and the citizens of the commonwealth by providing access to the academic and human resources of IUP.

The School of Continuing Education was created by the IUP Board of Trustees in May, 1966. Today, the school comprises Credit Programs, Conferences and Noncredit Programs, the Criminal Justice Training Center, and the Vocational Personnel Preparation Center. The school is characterized by its commitment to academic excellence and high-quality programs. The school maintains a dynamic environment which fosters innovation and experimentation in order to improve programs continually and respond to the ever-changing needs of society.

Credit Programs

The Credit Programs area offers a variety of opportunities for the adult and nontraditional learner to access the academic resources of IUP on a part-time basis. Courses may be selected from day or evening offerings.

The Associate of Arts Degree in General Studies is designed for the nontraditional or adult learner who seeks to acquire a broad base of knowledge in the liberal arts. This program consists of the core of Liberal Studies requirements of the IUP bachelor's degree programs plus 9 to 12 semester hours of electives. The student is encouraged to develop a plan of study with his or her academic advisor which will bring focus to his or her interest in a particular area or subject. No more than 30 semester hours may be transferred into this degree program from other colleges.

The Bachelor of Science degree in General Studies is designed for the mature adult student, who under faculty advisement can explore and develop an individualized plan of study which does not approach any existing IUP major. This self-designed plan of study must be based on a specific theme which incorporates basic and applied coursework within a theoretical framework culminating in a senior-year independent research project. At the time of application for degree candidacy through the School of Continuing Education or transfer from another major, the student must submit a plan of study which contains the proposed theme, rationale, and courses needed to satisfy the Special Interest Area. A faculty member will be assigned to assist with the plan of study prior to acceptance to degree candidacy. Students other than School of Continuing Education students must have completed 45sh before a request for transfer will be honored.

The student's plan of study, which is designed to fulfill the Special Interest Area, must be approved by the student's advisor and the dean of the School of Continuing Education.

Associate of Arts—General Studies

Liberal Studies: As outlined in the Liberal Studies Section with the following specifications and modifications:		**50-53**
Fine Arts	3sh	
Health and Wellness/ROTC	3-4sh	
Humanities	9sh	
Learning Skills	10-11sh	
Natural Science	7-8sh	
Social Science	9sh	
Controlled Liberal Studies Electives	9sh	
Free Electives:		**9-12**
Total Degree Requirements:		**62**

Bachelor of Science—General Studies

Liberal Studies: As outlined in Liberal Studies section	53-54
General Area of Study:	24
Choose at least 6sh from three of the four areas listed below. At least 12sh must be 300-level or above. Courses should relate to theme developed in Special Interest Area.	
Arts, Letters, and Culture Area: Art, Communications Media, English, French, German, Journalism, Music, Philosophy, Religious Studies, Spanish, Theater	
Human Behavior and Development Area: Anthropology, Health, Home Economics, Psychology, Sociology	
Science, Mathematics, and Technology Area: Biology, Chemistry, Computer Science, Geoscience, Mathematics, Physics	
Social and Political Systems Area: Economics, Geography and Regional Planning, History, Industrial and Labor Relations, Political Science	
Special Interest Area: With approval of advisor, student may select, from any department listed above, courses which focus on a particular need or interest. At least 12sh must be 300-level or above. The program must include either one research course which provides opportunities for extensive writing or an independent study project. Some courses will not be available to General Studies majors.	21
Electives: At least 6sh must be 300-level or above	25-26
Total Degree Requirements:	124

(1) Individually planned theme may not duplicate any existing degree programs which are otherwise available at IUP, nor may they be used to circumvent specific requirements within an existing major.
(2) No more than 30sh taken in any one department will count toward graduation.
(3) In the application of university policies, the Special Interest Area is considered as the major. Specifically, in order to graduate, students must be in academic good standing and attain a 2.00 GPA in the Special Interest Area.

Part-time Studies Program (Nondegree)

The Part-time Studies Program is designed to offer the adult and nontraditional learner the opportunity to begin or renew a college education at IUP. Through this program an individual may enroll in undergraduate credit courses to pursue personal interests, acquire new skills, or work toward formal admission to degree candidacy. Credit earned in this program may be applied to a degree upon formal admission to an IUP degree program.

Postbaccalaureate Program

The Postbaccalaureate Program is designed to provide access to undergraduate courses to individuals who have an earned baccalaureate degree. Students may be seeking a second bachelor's degree, additional teacher certification, or personal enrichment. Postbaccalaureate students may attend IUP on a part-time or full-time basis.

Off-Campus Studies Program

The Off-Campus Studies Program is designed to support the efforts of IUP and its faculty to offer academic programs at off-campus locations. The Master of Education, the Master of Arts in Adult and Community Education, the Executive MBA Program, the Master of Arts in Criminology, and the Master of Arts in Industrial and Labor Relations are offered in the IUP Center in Monroeville. In addition, the Executive MBA is offered in Johnstown and the Master of Science in Safety Sciences is available in Harrisburg. Undergraduate and graduate courses are also available periodically at various off-campus locations throughout the commonwealth.

Adult Advisement Services

Adult Advisement Services provides the part-time, nontraditional, and adult learner access to academic exploration and planning through individual conferences and workshops. Seminars are offered throughout the year to provide the opportunity for adult learners to become acquainted with the many resources of the university.

Center for Vocational Personnel Preparation

Thomas W. O'Brien, Director

Vocational-Technical Professional Studies

Sandra J. Durbin, Chairperson; Boyd, Debow, Dolecki, Gamble, Keith, Monaco, Rivosecchi, Spewock, Sylves, Whisner

Website: *http://www.iup.edu/voced*

The Vocational-Technical Professional Studies program offers undergraduate curricula that prepare preservice teachers, in-service teachers, supervisors, and administrators in vocational-technical education. Students enrolling in one of the vocational education programs may specialize in an area related to interest and/or previous work experience. Programs may lead to either a Bachelor of Science in Education degree with certification or to professional certification only. Program graduates have a broad range of employment opportunities as teachers/trainers in secondary schools, vocational-technical schools, postsecondary schools, and business and industry.

Certification to teach vocational-technical education in the commonwealth's secondary schools is issued to individuals who meet statutory requirements, demonstrate occupational/technical proficiency on a nationally standardized occupational competency examination, and complete 60 semester hours of the Pennsylvania Department of Education's approved university program. In the IUP program, a plan of studies will be tailored to each student's unique background (i.e., electrical, electronics, data processing, drafting, welding, dental, etc.) and professional needs.

Certification to serve as a cooperative education teacher-coordinator in the commonwealth's secondary schools can be earned by completing a program of studies tailored to each student's individual background and professional needs. The program prepares individuals for managing industrial cooperative training and school-to-work transitional experiences. For persons holding a valid Pennsylvania Instructional Certificate, the program of studies will be individualized based upon educational credits earned.

Each program offered by the Center for Vocational Personnel Preparation requires completion of the following semester hours:

Bachelor of Science in Education	124sh
Cooperative Education Teacher/Coordinator Certificate	75sh
Vocational Technical Education Certificate	60-62sh

Bachelor of Science in Education—Vocational-Technical Education

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **Social Science:** PSYC 101 **Liberal Studies Electives:** no courses with VOED prefix			53-55
College:			6
Professional Educational Sequence:			
EDSP 102	Educational Psychology	3sh	
FDED 102	American Ed in Theory and Practice	3sh	
Major:			30
Required Courses:			
VOED ED 100	Prep of the Vocational Professional I	15sh	
VOED ED 400	Prep of the Vocational Professional II	15sh	

Other Requirements:			27
Vocational Technical:			
ENGL 310	Public Speaking	3sh	
VOED 401	Special Topics in Vocational Technical Preparation	3-12sh	
VOED 402	Special Topics in Vocational Pedagogical Preparation	3-15sh	
VOED 450	Technical Preparation of the Vocational Professional	24sh	
——-	Other as approved		
Free Electives:			6-8
Total Degree Requirements:			124

Certificate—Vocational-Technical Education

Liberal Studies: As follows:			21-23
Mathematics: MATH 101			
English: ENGL 101			
Humanities: one course from lists			
Fine Arts: one course from list			
Natural Science: one course, lab or non-lab			
Social Science: PSYC 101			
Liberal Studies Electives: one course, no course with VOED prefix			
College:			6
Professional Educational Sequence:			
EDSP 102	Educational Psychology	3sh	
FDED 102	American Ed in Theory and Practice	3sh	
Major:			33
Required Courses:			
ENGL 310	Public Speaking	3sh	
VOED 100	Prep of the Vocational Professional I	15sh	
VOED 400	Prep of the Vocational Professional II	15sh	
Free Electives:			0
Total Certification Requirements:			60-62

Certificate as Secondary School Cooperative Education Teacher/Coordinator

Liberal Studies: As follows:			21-23
Mathematics: MATH 101			
English: ENGL 101			
Humanities: one course from lists			
Fine Arts: one course from list			
Natural Science: one course, lab or non-lab			
Social Science: PSYC 101			
Liberal Studies Electives: one course, no courses with VOED prefix			
College:			6
Professional Educational Sequence:			
EDSP 102	Educational Psychology	3sh	
FDED 102	American Ed in Theory and Practice	3sh	
Major:			48
Required Courses:			
ENGL 310	Public Speaking	3sh	
VOED 100	Prep of the Vocational Professional I	15sh	
VOED 400	Prep of the Vocational Professional II	15sh	
VOED 402	Special Topics in Vocational Pedagogical Preparation	15sh	
Free Electives:			0
Total Certification Requirements:			75-77

Conferences and Noncredit Programs

Robin A. Gorman, Director of Workforce Development and Community Programs

The School of Continuing Education offers a wide variety of noncredit programs which meet business, industry, and community needs in the areas of workforce training and development, professional development, personal enrichment, and public service.

Business and Technology

Courses and workshops are offered in the following areas: Computer Literacy, Professional Development, Small Business Development, and Customized Training for Business and Industry. Courses may be offered at IUP or at the business/industry site, as preferred.

Community-University Studies

Noncredit courses and workshops are offered in Indiana throughout the year. Personal growth and enrichment topics include creative leisure, self-improvement, fitness and dance, culinary arts, languages, outdoor pursuits, Elderhostel, and Great Decisions. There are no exams, no grades, and the instructors are knowledgeable and enthusiastic about introducing others to their areas of expertise.

In addition, the Academy of Living and Learning, a collaborative effort between the School of Continuing Education and Calvary Presbyterian Church of Indiana, offers a potpourri of trips, lectures, and discussions on a wide variety of subject matter. Held during the day, all classes are open to interested community people. These programs are provided as a service to the community.

Special Programs

The education and training needs of health and human service professionals are met through course offerings, one-day workshops, seminars, and conferences. In addition, Youth Experience in Summer (YES) provides educational enrichment for youth in elementary grades.

Conferences

The professional staff of the Office of Conferences assists in planning and implementing experiences for a variety of professional, subject matter-related, and general interest groups. Assistance in budgeting, marketing, designing of brochures, on-site registration, and evaluation are examples of services available to our clients. Coordination of off-campus events is also a service available to conference planners.

Criminal Justice Training Center

Gary M. Welsh, Director

Website: *http://www.iup.edu/crimjustice*

The Criminal Justice Training Center's role in both the university and the community is to provide high-quality education and training programs for the continuing professionalism of the criminal justice system.

These programs include seminars for in-service personnel in fulfillment of mandatory continuing education requirements. They are conducted on an "as needed" basis covering an unlimited range of topics, such as vehicle and criminal law updates, search and seizure, accident investigation, alcohol enforcement, and driver proficiency. Special programs are provided to offer the basic 750-hour academy training required for law enforcement service under Mandatory Act 120. Training under the Lethal Weapons Act 235 provides the basic requirements and mandatory recertification for armed security personnel.

Course Descriptions

Credit designation at right of title is expressed in (c) class hours per week, (l) lab or (d) discussion section hours per week, and (sh) semester hours of credit per semester.

ACCT Accounting

Department of Accounting
Eberly College of Business and Information Technology

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course. Business majors (except those majoring in Business Education) who have not achieved Junior Standing are normally not permitted to enroll in 300- or 400-level courses.

ACCT 201 Accounting Principles I 3c-0l-3sh
Introduces the student to the accounting cycle in service and merchandising concerns using the single proprietorship form of business organization; covers use of special journals and subsidiary ledgers in the accounting system as well as accounting and internal control procedures for cash, receivables, inventory, and plant and equipment.

ACCT 202 Accounting Principles II 3c-0l-3sh
Prerequisites: Grade of C or better in ACCT 201, sophomore status
Covers accounting principles and procedures for payroll, partnerships, corporations, long-term liabilities and investments, and manufacturing firms with a general accounting system. Introduces the student to cost accounting systems, financial statements analysis, budgeting, and use of accounting information in making managerial decisions.

ACCT 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

ACCT 299 Cooperative Education I 0c-0l-2sh
Prerequisites: Completion of 55sh with a minimum 2.0 GPA including a grade of C or better in ACCT 201, ACCT 202, and IFMG 241, and approval of the cooperative advisor
The initial experience in a program designed to combine classroom theory with practical application through job-related experiences. Students are actively employed in the accounting area in business, industry, government, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives in accounting. The student is expected to complete subsequently ACCT 399 or an internship.

ACCT 300 Managerial Accounting 3c-0l-3sh
Prerequisite: ACCT 202 (not open to Accounting majors)
Emphasizes the use of accounting information in performing the managerial functions of planning, control, decision making, and performance evaluation. Note: Accounting majors will not be granted degree credit for ACCT 300.

ACCT 301 Intermediate Accounting I 3c-0l-3sh
Prerequisite: Grade of C or better in ACCT 202
An overview of the foundation of accounting theory dealing with application of generally accepted accounting principles as promulgated in professional pronouncements to the reporting process and to accounting for various asset items in the financial statements.

ACCT 302 Intermediate Accounting II 3c-0l-3sh
Prerequisite: Grade of C or better in ACCT 301
Application of generally accepted accounting principles to various areas such as accounting for corporations, long-term investments in securities, bonds, pension costs, leases, etc.

ACCT 311 Cost Accounting 3c-0l-3sh
Prerequisite: Grade of C or better in ACCT 202
Cost accounting methods and procedures including cost accumulation under job order cost system and process cost system, cost allocation, budgeting, and accounting for spoilage, joint, and by-products. The planning and control aspect of cost accounting is emphasized.

ACCT 321 Federal Taxes 3c-0l-3sh
Prerequisite: Grade of C or better in ACCT 202
Acquaints the student with federal income tax laws as they apply to individual taxpayers and partnerships. (Offered as AG 421 prior to 1999-2000)

ACCT 399 Cooperative Education II 0c-0l-3sh
Prerequisites: ACCT 299, completion of 85sh with a cumulative 2.0 GPA, a 2.3 GPA in ACCT 301, 302, and 311 with a grade of C or better in each course, and approval of the cooperative advisor
The subsequent course in cooperative education is designed to combine classroom theory with practical application through job-related experiences. Students are actively employed in the accounting area in business, industry, government, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives in accounting.

ACCT 401 Advanced Accounting 3c-0l-3sh
Prerequisite: ACCT 302
A study of accounting issues of specialized nature including partnerships, organization and liquidation, agency and branch accounting, accounting for business combinations, preparation of consolidated financial statements, accounting for government and not-for-profit entities, accounting for estates and trusts, and receivership accounting.

ACCT 412 Advanced Cost Accounting 3c-0l-3sh
Prerequisite: Grade of C or better in ACCT 311
A study of budgets, standard costs, direct and absorption costing, analysis of cost variances, and extensive analysis of various cost control and profit planning programs.

ACCT 422 Federal Taxation of Corporations, Partnerships, Estates, and Trusts 3c-0l-3sh
Prerequisites: ACCT 302 and 321
An advanced course in federal income taxation as it applies to taxpayers other than individuals. Covers the tax treatment of those property transfers subject to federal and state gift and death taxes. The tax planning aspect of the various course topics as well as tax research methodology are also discussed.

ACCT 431 Auditing 3c-0l-3sh
Prerequisite: ACCT 302
A study of auditing theory and practical application of auditing standards and procedures to the review, testing, and evaluation of accounting controls and to the verification of transactions and balances to express an opinion in an audit report on the fairness of financial statements' presentation.

ACCT 435 Internal Auditing 3c-0l-3sh
Prerequisite: ACCT 431
Covers four issues: foundations for internal auditing, administering internal auditing activities, operational areas, and special relationships and evaluation for internal auditing.

ACCT 441 Accounting for Government and Nonprofit Organizations 3c-0l-3sh
Prerequisite: ACCT 302
Presents the views of authoritative professional organizations as to desirable standards of accounting and reporting for governmental and nonprofit entities. Topics include budgeting and budgetary accounts, accounting for various funds, the general fixed assets group of accounts, the financial reporting process, and application of the principles of fund accounting in specific areas.

ACCT 451 Seminar in Accounting Standards 3c-0l-3sh
Prerequisite: ACCT 302
A study of professional standards having authoritative support in the field of accounting. APB opinions, FASB interpretations, and SEC Accounting Series Releases are discussed.

ACCT 461 Accounting Systems 3c-0l-3sh
Prerequisites: ACCT 302, ACCT 311, IFMG 300
A study of concepts, principles, and procedures of accounting system design, installation, implementation, auditing, and maintenance in relating to system objectives, information requirements, constraints, system elements, and considerations on a computerized basis.

ACCT 471 International Accounting 3c-0l-3sh
Prerequisite: ACCT 311 for Accounting majors or ACCT 300 for non-Accounting majors
A comparative study of the effects of differences in cultural and business philosophies on national and international accounting policies. Specific financial accounting controversies, such as accounting for transactions involving foreign currency exchanges, will be discussed. International management accounting topics will include international transfer pricing policies, performance evaluations of multinational managers and divisions, and management information systems. International aspects of financial planning, auditing, and taxation practices will also be reviewed.

ACCT 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

ACCT 482 Independent Study var-1-3sh
Prerequisite: Prinr approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ACCT 488 Internship in Accounting (Industrial and Government) 6sh
Prerequisites: Consent of departmental chairperson and dean, Eberly College of Business and Information Technology; cumulative 2.75 GPA and 3.0 GPA in accounting courses
Practical experiences, generally totaling 400 hours, in an industrial or government accounting setting.

ACCT 493 Internship in Accounting (Public) 6sh
Prerequisites: Consent of departmental chairperson and dean, Eberly College of Business and Information Technology; 3.00 cumulative GPA and 3.00 GPA in accounting courses
Practical experiences, generally totaling 400 hours, with a public accounting firm.

ADVT Advising and Testing

Advising and Testing Center
Division of Student Affairs

ADVT 170 Career Exploration 1c-01-1sh
Introduces students to the theoretical and practical framework with which to explore careers compatible with overall academic skills, aptitudes, and life goals. Students will examine the world of work, assess their interests and abilities, and make realistic decisions on academic majors and careers. Notes: (1) Certain sections of this course will be restricted to specific enrollment groups. (2) Offered as ED 170 prior to 1997-98. (3) Course is cross-listed as LRNC 170. These courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

ANTH Anthropology

Department of Anthropology
College of Humanities and Social Sciences

ANTH 110 Contemporary Anthropology 3c-0l-3sh
An introduction to the nature of anthropological inquiry. By using the anthropological perspective, current relevant topics will be discussed. Topics could include, but are not limited to, changing myths and rituals, legal anthropology, cross-cultural aspects of aging, gender roles, evolutionism and creationism, cultural extinction, and world hunger.

ANTH 211 Cultural Anthropology 3c-0l-3sh
Explores the nature of culture as a human survival technique. Provides a framework for appreciation and understanding of cultural differences and similarities in human societies, past and present.

ANTH 213 World Archaeology 3c-0l-3sh
A survey of the prehistory of Western and non-Western cultures with an emphasis on the development of technology and on the evolution of adaptive strategies with particular attention to the origins of agriculture. Exposes the students to the

diversity of past cultural systems and to the methodological and theoretical questions of concern to archaeologists.

ANTH 222 Biological Anthropology 3c-0l-3sh
An introduction to the goals and techniques of biological anthropology with an emphasis on primatology, paleoanthropology, genetics, and osteology. Provides a basis for evaluating the role of biology in human behavior.

ANTH 233 Language and Culture 3c-0l-3sh
Focuses on social and cultural functions of language. Particular emphasis given to problems in anthropology with respect to non-Western languages.

ANTH 244 Basic Archaeology 3c-0l-3sh
An introduction to the goals and methods of anthropological archaeology with particular attention to the analysis of cultural chronology, past lifeways, and cultural process. Provides laboratory experience with artifacts and other archaeological data.

ANTH 271 Cultural Area Studies: Africa 3c-0l-3sh
Explores the cultural diversity of the continent of Africa. The first unit examines the historical processes which shape modern society, including the formation of indigenous African empires, the evidence for trade routes, slave trading, and colonialism. The second unit examines the nature of African traditional societies, including analyses of forager and agricultural groups. The last unit covers issues of contemporary development in Africa such as famine and agricultural policy, the status of women in economic development, and apartheid. Reading includes ethnographic and historical accounts of African society as well as selections by African writers on the issues of contemporary society. (Also offered as SOC 271; may not be taken for duplicate credit.)

ANTH 272 Cultural Area Studies: China 3c-0l-3sh
Designed to assist the student in developing an understanding of contemporary China. While the course will begin with prehistoric and historic aspects of China, the focus will be on contemporary issues presented in the context of anthropological theory. Specific Chinese cultural components that will be investigated include values, attitudes, norms, social organization, linguistics, and folklore. (Also offered as SOC 272; may not be taken for duplicate credit.)

ANTH 273 Cultural Area Studies: Southeast Asia 3c-0l-3sh
An introduction to the peoples and cultures of Southeast Asia. Prehistory and the development of indigenous states in the area and analysis of impact of world religions, such as Islam, and Western colonialism. Also examines modern hunter-gatherer and farming societies and discusses contemporary issues in social and economic change, including the Green Revolution, tropical deforestation, the struggle of ethnic minority tribal peoples, and the plight of Indochinese refugees. (Also offered as SOC 273; may not be taken for duplicate credit.)

ANTH 274 Cultural Area Studies: Latin America 3c-0l-3sh
An introduction to the peoples and cultures of Latin America. Focuses on the prehistory and development of pre-Columbian complex societies in Mesoamerica and the Andes and analyzes the impact of European colonialism on these major regions. Also examines contemporary issues, such as civil wars, economic development, rural-urban migrations, and migration and immigration of Latin American peoples into the United States. (Also offered as SOC 274; may not be taken for duplicate credit.)

ANTH 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

ANTH 286 Marriage, Kinship, and the Family 3c-0l-3sh
A sociological and anthropological study of patterns of marriage, kinship, and family life, with an emphasis on the relationship between family patterns and other social institutions. Topics covered include the family and marriage in historical and comparative perspective, worldwide patterns of gender stratification, incest and incest avoidance, class and race contexts of family patterns, mate selection and love, parenthood and child rearing, domestic and sexual violence, alternative family lifestyles, and the current crisis and possible future of the family. Intended for a broad audience but also open to sociology and anthropology majors and minors. (Also offered as SOC 286; may not be taken for duplicate credit.)

ANTH 314 Native Americans 3c-0l-3sh
A survey of culture history and culture area characteristics of the Indians of North America. Detailed study of representative groups related to historical, functional, and ecological concepts.

ANTH 315 North American Archaeology 3c-0l-3sh
Prerequisite: ANTH 110 or 244 or permission of the instructor
A survey of North American prehistory with an emphasis on cultural ecology and technology. Attention is given to all geographic areas north of Mexico, but the focus is on the Eastern Woodlands.

ANTH 316 Anthropology of Religion 3c-0l-3sh
Prerequisite: ANTH 110 or 211
Explores nature, function, and universal characteristics of religion in human society by utilizing cross-cultural approach. Theories concerning religious phenomena serve as topics for discussion.

ANTH 317 Archaeology Research Design and Analysis 3c-0l-3sh
Prerequisite: ANTH 244 or permission of the instructor
An introduction to theory and method in archaeological research through lecture, laboratory exercises, and individual projects. Provides students with actual experience analyzing and interpreting archaeological data sets.

ANTH 318 Museum Methods 3c-0l-3sh
Prerequisite: ANTH 110 or 211 or 244
Lecture and laboratory course surveying the role of museums as social and educational institutions, types of museums, museum administration, and museum architecture. Procedures for collection, curation, preservation, and storage of anthropological and natural history specimens examined.

ANTH 320 Archaeological Field School var-6sh
Prerequisite: ANTH 110, 244, or permission of instructor
An introduction to archaeological survey, field excavation, and laboratory processing. Field school students participate in one or more of the ongoing research projects of the IUP Archaeology Program.

ANTH 340 Anthropology of Aging 3c-0l-3sh
Introduces the student to various experiences faced by elderly people in numerous world societies. Explores the impact of such factors as ethnicity, nationality, race, and class and the processes of cultural change on the lives of people growing old. Comparative, cross-cultural perspectives will be stressed.

ANTH 350 Anthropology of Women 3c-0l-3sh
Designed for any student with an interest in the lives of women around the world, regardless of whether or not he or she has a strong background in anthropology. Examines the social roles, rights, and responsibilities of women cross-culturally, viewing both women's productive (economic) functions as well as reproductive functions. Reading describes the position of women in technologically simple societies and addresses the comparative position of women in the industrialized socialist and capitalist countries. The central theme of the course is an examination of how the position of women changed in the twentieth century.

ANTH 360 Applied Anthropology 3c-0l-3sh
Applied anthropology focuses on the anthropologist as an agent of social change and bridges the gap between theories of cultural behavior and the policies which affect contemporary cultures. Examines the historical role of anthropologists in early public administration and then examines at length the work of contemporary applied anthropologists in programs of international economic development (health, agriculture, and education), in domestic human service planning and delivery, in cultural resource preservation, and in their role as advocates for unempowered minorities.

ANTH 365 Native North American Religions 3c-0l-3sh
An introduction to the indigenous religions of North America and to the peoples who practice these rich and varied approaches to the sacred. Not only examines major religious themes and dimensions (myth, ritual, ethics, etc.), but also includes a historical perspective on North American Indian lifeways. This perspective involves discussion of the clash with Euro-American values and contemporary native religious responses to social crisis and change. (Also offered as RLST 365; may not be taken for duplicate credit)

ANTH 404 Social and Cultural Change 3c-0l-3sh
Prerequisite: ANTH 110 or SOC 151
An exploration of current theoretical perspectives on social and cultural change. Special attention given to planned change at the local or regional level.

ANTH 415 Cultural Resource Management 3c-0l-3sh
Prerequisite: ANTH 244 or consent of the instructor
Provides an understanding of how cultural resources are being preserved and managed under current American laws and regulations with particular emphasis on historic properties, such as historic buildings and archaeological sites. Case studies and field trips are incorporated so that students gain a thorough understanding of key problems and issues in historic preservation and cultural resource management.

ANTH 420 Cultural Ecology 3c-0l-3sh
Prerequisite: ANTH 110 or 211
Introduces the student to the field of ecological anthropology by exploring the concept of the ecosystem in relationship to varying human adaptive strategies. Illustrates the importance of understanding man-environment interactions both in studying the developing world and in investigating the past.

ANTH 444 Medical Anthropology 3c-0l-3sh
Prerequisite: 9sh in ANTH or permission
Focuses on the study of human confrontation with disease and illness and on the adaptive arrangements made by various human groups for dealing with these dangers. Health and disease are viewed from a broad array of micro and macro perspectives, e.g., evolutionary, ecological, and psychosocial. Designed for nursing and social work students as well as social and biological sciences students.

ANTH 456 Field Research Methods 3c-0l-3sh
Prerequisite: 9sh in ANTH
An examination of methods and practice of sociology and anthropology in the areas of qualitative and quantitative methods. Concentrates upon the development of field notes, interviewing techniques, participant observation, etc. Qualitative methods of sampling and analysis will include theoretical sampling and analytic induction. Brief background research into community, organizational, and group structure will also be emphasized.

ANTH 480 Anthropology Seminar var-1-3sh
Prerequisite: 9sh in ANTH or permission
A seminar approach to the integration of the fields of anthropology. Designed to assist the advanced student in understanding the nature of anthropology, the major theoretical issues, and the history of intellectual development.

ANTH 481 Special Topics in Anthropology var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

ANTH 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ANTH 483 Readings in Anthropology var-1-3sh
Directed readings on special topics in anthropology. Instructor guides selection of readings.

ANTH 493 Internship in Anthropology var-3-12sh
Prerequisite: Permission of the instructor
Designed to offer students practical experience in any of the specialized fields of anthropology (physical, social-cultural, archaeology, or linguistics). Each student develops objectives in consultation with a particular departmental faculty member who is supervising the internship. Detailed field notes and a major paper based on the experience are required.

APMU Applied Music

Department of Music
College of Fine Arts

Music majors and others who may qualify take private instruction in their respective major areas of performance in instrument or voice for up to eight semesters. Half-hour lessons are given each week (2 sh) for students enrolled in the B.S. and B.A. degree programs. A one-hour lesson (4 sh) is scheduled by students enrolled in the B.F.A. degree program only.

APMU 101, 151, 201, 251, 301, 351, 401, 451	Piano I-VIII
APMU 102, 152, 202, 252, 302, 352, 402, 452	Organ I-VIII
APMU 103, 153, 203, 253, 303, 353, 403, 453	Harpsichord I-VIII
APMU 104, 154, 204, 254, 304, 354, 404, 454	Harp I-VIII
APMU 105, 155, 205, 255, 305, 355, 405, 455	Voice I-VIII
APMU 106, 156, 206, 256, 306, 356, 406, 456	Violin I-VIII
APMU 107, 157, 207, 257, 307, 357, 407, 457	Viola I-VIII
APMU 108, 158, 208, 258, 308, 358, 408, 458	Cello I-VIII
APMU 109, 159, 209, 259, 309, 359, 409, 459	String Bass I-VIII
APMU 110, 160, 210, 260, 310, 360, 410, 460	Flute I-VIII
APMU 111, 161, 211, 261, 311, 361, 411, 461	Clarinet I-VIII
APMU 112, 162, 212, 262, 312, 362, 412, 462	Oboe I-VIII
APMU 113, 163, 213, 263, 313, 363, 413, 463	Bassoon I-VIII
APMU 114, 164, 214, 264, 314, 364, 414, 464	Saxophone I-VIII
APMU 115, 165, 215, 265, 315, 365, 415, 465	Trumpet I-VIII
APMU 116, 166, 216, 266, 316, 366, 416, 466	French Horn I-VIII
APMU 117, 167, 217, 267, 317, 367, 417, 467	Trombone I-VIII
APMU 118, 168, 218, 268, 318, 368, 418, 468	Euphonium I-VIII
APMU 119, 169, 219, 269, 319, 369, 419, 469	Tuba I-VIII
APMU 120, 170, 220, 270, 320, 370, 420, 470	Percussion I-VIII
APMU 121, 171, 221, 271, 321, 371, 421, 471	Guitar I-VIII

APMU 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ARED Art Education

Department of Art
College of Fine Arts

ARED 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

ARED 315 Survey of Art Education 3c-0l-3sh
A seminar to introduce the art education major to the principles and practices of teaching visual arts K through 12. Field experiences, pre-student teaching activities, introduction to literature, and history and philosophies of art education emphasized. (Prerequisite to student teaching) Taught Fall semester only.

ARED 317 Art Education Methodology at the Elementary Level 1c-3l-3sh
Examines children's artistic development, art programs, planning, motivation, and evaluation. Weekly teaching experience is an integral part of the course. (Prerequisite to student teaching) Taught Fall semester only.

ARED 318 Art Education Methodology at the Secondary Level 1c-3l-3sh
The relationship of art education to the total secondary curriculum is studied to determine goals of junior-senior high school art. The adolescent creative products are analyzed to help the prospective art teacher to identify with problems of students. (Prerequisite to student teaching) Taught Spring semester only.

ARED 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

ARED 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ARHI Art History

Department of Art
College of Fine Arts

ARHI 101 Introduction to Art 3c-0l-3sh
Designed to introduce the student to the significance of art as related to contemporary living and our historical heritage.

ARHI 205 Ancient to Medieval Art 3c-0l-3sh
A study of art from prehistoric times to the Middle Ages. Humankind's artistic development is seen in relation to political, social, economic, and religious events.

ARHI 206 Renaissance to Baroque Art 3c-0l-3sh
A study of art from the Renaissance to the Baroque in light of the historical events which affect humankind's artistic impulses and development.

ARHI 211 Modern Art 3c-0l-3sh
A survey of the revolutionary movements which began about 1850; concludes with trends in contemporary arts.

ARHI 222 Art in America 3c-0l-3sh
Surveys American art and its relation to the development of American ideas and ideals.

ARHI 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

ARHI 300 Native American Art 3c-0l-3sh
Prerequisites: ARHI 101, junior standing, or permission
A survey of the broad forms of visual arts and crafts that reflects the lifeways of Native Americans from paleo-indian origins to A.D. 1900.

ARHI 407 Medieval Art 3c-0l-3sh
Art and architecture of Europe during the Middle Ages, beginning with early Christian and Byzantine and concluding with the Gothic period. Dual listed for graduate credit as ARHI 507.

ARHI 408 Italian Renaissance Art 3c-0l-3sh
Italian art from 1400s through 1650 and Mannerist movement. Special attention paid to great masters of the period. Dual listed for graduate credit as ARHI 508.

ARHI 409 Baroque and Rococo Art 3c-0l-3sh
A general survey of art from 1575 to 1775, will include architecture, sculpture, painting, and other arts. Dual listed for graduate credit as ARHI 509.

ARHI 412 Classical Art 3c-0l-3sh
A historical survey of the architecture, painting, sculpture, and minor arts of the classical period of Greece and Rome, including the Minoan, Mycenaean, and Etruscan cultures.

ARHI 413 Senior Seminar 3c-0l-3sh
Intended to help students develop adequate vocabularies and methods to be used in discussion and criticism of works of art.

ARHI 416 Northern Renaissance Art 3c-0l-3sh
Explores phenomena of art north of the Alps from 1400 to 1600, especially as it appears in the Lowlands, as well as side explorations into art of France, Germany, Austria, and the court at Prague.

ARHI 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

ARHI 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ART Art (Studio)

Department of Art
College of Fine Arts

ART 100 Arts of the Twentieth Century 3c-0l-3sh
Designed to expand student response to visual, aural, and kinetic art forms of this century with special emphasis on recent decades. Includes lecture, studio, and field experiences.

ART 111 Figure Drawing 0c-6l-3sh
A foundation course in drawing, including a study of the structure of drawing and composition with a variety of media and subject matter.

ART 112 Fundamentals of Drawing 0c-6l-3sh
Seeks to integrate basic principles and fundamentals of drawing and design.

ART 113 Three-Dimension Design 0c-6l-3sh
Basic elements and principles of design are studied. A course in design in three dimensions.

ART 114 Color and Two-Dimensional Design 0c-6l-3sh
Focuses on the consistent properties of color and the manner in which two dimensional design can be organized. Specific attention is given to the complex interactions of color within two-dimensional design.

ART 120 Principles of Design 0c-4l-2sh
Principles of design and color are studied and applied to a crafted object. Major emphasis on aesthetic quality inherent in designing with materials.

ART 211 Painting 0c-6l-3sh
An introductory course in painting in which a variety of materials, techniques, and approaches are explored.

ART 213 Woodworking: Function and Form 0c-6l-3sh
Involves the study of woodworking and furniture design as it relates to the individual designer-artist. Students will experience a formal background in both woodworking technique and the application of design.

ART 214 Ceramics 0c-6l-3sh
A general introduction to the techniques and aesthetics of clay. The student will work both at the wheel and with hand building methods.

ART 215 Sculpture 0c-6l-3sh
An introductory course in sculpture with an emphasis on study of form as well as visualizing in the third dimension.

ART 216 Basic Metals 0c-6l-3sh
An introduction to metal work with an emphasis upon creation of functional and nonfunctional art objects. Approached from the viewpoint of beginner learning basic processes of metal fabrication.

ART 217 Printmaking 0c-6l-3sh
An introduction to basic techniques of production of fine prints including work in relief, intaglio, lithograph, and serigraph processes.

ART 218 Graphic Design 0c-6l-3sh
Students explore various techniques and their application to such commercial art projects as package design, trademark, and other design problems. Lettering is stressed, both instant type and hand lettering.

ART 219 Fibers 0c-6l-3sh
Provides students with introductory working knowledge in design and execution of projects in non 4/harness loom weaving and related fabric areas. Other fiber techniques, including handmade paper, available for students to explore as desired.

ART 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

ART 421 Advanced Drawing 0c-6l-3sh
Prerequisites: ART 111 and 112
Designed to meet the needs of the student who has some background in the field. Problems of composition, two- and three-dimensional relationships, and surface are on an individual basis.

ART 451 Advanced Woodworking: Function and Form 0c-6l-3sh
Prerequisite: ART 213
Offers advanced training and skills involving the study of contemporary furniture design and woodworking. An emphasis will be on a technical and aesthetic point of view.

ART 452 Advanced Ceramics 0c-6l-3sh
Prerequisite: ART 214
Continued exploration of the field of ceramic production, along with kiln firing and glaze formulation.

ART 453 Advanced Sculpture 0c-6l-3sh
Prerequisite: ART 215
Gives the student an opportunity to pursue independent study in sculpture. Materials and processes will be individually chosen and the work related to broadening concepts.

ART 454 Advanced Painting 0c-6l-3sh
Prerequisite: ART 211
Individual experimentation and exploration by the painter and investigation of the various technical approaches.

ART 455 Advanced Graphic Design 0c-6l-3sh
Prerequisite: ART 218
Stresses advanced techniques in layout and illustration. The student explores ideas, such as creation of trademarks and how products are designed. Layouts are analyzed as to their quality. Package design is studied.

ART 457 Advanced Printmaking 0c-6l-3sh
Prerequisite: ART 217
Student elects to study one of the printmaking processes in greater depth and works toward development of own techniques, working processes, and ideas.

ART 459 Advanced Fibers 0c-6l-3sh
Prerequisite: ART 219
Provides student with a working knowledge in design and execution of projects in weaving and related areas. Other fiber techniques, including handmade paper, will be available for the students to explore as desired.

ART 460 Advanced Metals 0c-6l-3sh
Prerequisite: ART 216
Design and processes associated with art of metal are given greater concentration. The developing artist is encouraged to investigate, in depth, one or more of the metal arts as an extension of the basic course.

ART 481 Special Topics var-1-3sh
May provide an in-depth study of a narrowly defined area of the discipline. Subject matter may change with repeated offering of the course. May be repeated for credit.

ART 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ART 493 Internship var-3-12sh
Designed for art majors who wish to receive practical experience working within professional situations which relate to the student's artistic and occupational goals.

BIOC Biochemistry

Biochemistry Program
College of Natural Sciences and Mathematics

BIOC 301 Biochemistry I 3c-0l-3sh
Prerequisites: BIOL 111 and CHEM 232
An introduction to biochemistry emphasizing the structure and function relationships of proteins, enzymes, and vitamins; bioenergetics; and the metabolism of carbohydrates and lipids.

BIOC 302 Biochemistry II 3c-0l-3sh
Prerequisite: BIOC 301
A continuation of BIOC 301 concerning the metabolism of nitrogen, amino acids, nucleotides, and nucleic acids and the function of cell membranes, hormones, and specialized tissues.

BIOC 311 Biochemistry Laboratory I 0c-4l-1sh
Prerequisites: BIOL 111 and CHEM 232
A companion to BIOC 301 including experiments in photometry, enzyme kinetics and purification, lipid isolation and characterization, electron transport in respiration and photosynthesis, and use of radioisotopes.

BIOC 312 Biochemistry Laboratory II 0c-4l-1sh
Prerequisite: BIOC 311
A companion to BIOC 302 including experiments in membrane characterization, properties of amino acids, isolation and function of nucleic acids, and synthesis of proteins and nucleic acids.

BIOC 480 Biochemistry Seminar I 1c-0l-1sh
Prerequisites: BIOC 302 and 312
A discussion of recent trends in biochemical thought. Oral and written reports on assigned readings, library or laboratory research. Guest lecturers. The combination BIOC 480 and 490 counts as one writing-intensive course.

BIOC 481 Special Topics in Biochemistry var-1-3sh
Prerequisite: BIOC 302 or CHEM 351
A lecture-discussion course of recent biochemical topics or those of unique interest. Topic and instructors to change annually.

BIOC 482 Independent Research in Biochemistry var-1-3sh
Prerequisites: BIOC 302 and 312, permission by program coordinator
Student conducts a research project in any area of biochemistry. Work supervised by faculty. Does not involve regular class or lab hours. Enrollment by permission only.

BIOC 490 Biochemistry Seminar II 1c-0l-1sh
Prerequisites: BIOC 302, 312, and 480
A discussion of recent trends in biochemical thought. Oral and written reports on assigned readings, library or laboratory research. Guest lecturers. The combination BIOC 480 and 490 counts as one writing-intensive course.

BIOL Biology

Department of Biology
College of Natural Sciences and Mathematics

BIOL 103 General Biology I 3c-2l-4sh
Prerequisite: Non-Biology majors only
A basic introduction to ecology, biochemistry, and cell biology, genetics, and evolution.

BIOL 104 General Biology II 3c-2l-4sh
Prerequisites: BIOL 103, non-Biology majors only
A basic introduction to plant and animal physiology, neurobiology, animal behavior, and plant and animal reproduction and development.

BIOL 105 Cell Biology 3c-0l-3sh
Prerequisite: Non-Biology majors only
An introductory course to provide concepts and applications for understanding human biological function from the point of view of cellular biology.

BIOL 111 Principles of Biology I 3c-3l-4sh
Prerequisite: Must be taken after or concurrent with CHEM 111
Introduces the student to principles of biology, specifically in the topics of cell structure and function, genetics, and physiology. Develops skills in the use of the scientific method. Designed for biology majors.

BIOL 112 Principles of Biology II 3c-3l-4sh
Prerequisite: BIOL 111
Introduces the student to principles of biology, specifically in the topics of reproduction, development, evolution, ecology, and animal behavior. Develops skill in the use of the scientific method. Designed for biology majors.

BIOL 114 Environmental Science 3c-0l-3sh
Prerequisite: Non-Biology majors only
An introduction to environmental science with an emphasis on human impacts. Uses an interdisciplinary approach to the consideration of population growth, pollution, preservation of species, and establishment of public policy. Students

will learn basic principles in ecology as the basis for understanding problems of the environment.

BIOL 115 Biotic Diversity of North America 3c-0l-3sh
Prerequisite: Non-Biology majors and non-Biology minors only
An introduction to the biological diversity of North America from Barrow, Alaska, to Tehuantepec, Mexico. All major aquatic and terrestrial biomes occurring in North America will be examined with regard to plant forms, animal composition, and environmental (abiotic) conditions.

BIOL 116 Introduction to Marine Biology 3c-0l-3sh
Prerequisite: Non-Biology and non-Biology Education majors and non-Biology minors only
An introduction to the world of marine biology. Topics covered will include a discussion of the major groups of plants and animals found in the marine environment and a discussion of the major communities that make up the oceans of the world.

BIOL 117 Understanding HIV Biology and AIDS 3c-0l-3sh
An introduction to the AIDS virus in which the mode of infection, transmission, and prevention will be used as an illustration of biological principles. Will profile biological indicators for HIV disease and its progression to AIDS. Therapeutic and nontherapeutic approaches to treat HIV infections will be emphasized.

BIOL 119 Emerging Diseases 3c-0l-3sh
Prerequisite: Non-Biology majors and non-Biology minors only
Intended primarily to provide the student with an understanding of the biological basis of infectious diseases and the social, historical, and ethical consequences of these types of afflictions. Covers background material such as the germ theory of disease and the cell theory at an introductory level; includes specific cases of emerging or reemerging infectious diseases with emphasis on current events relating to disease outbreaks.

BIOL 150 Human Anatomy 2c-3l-3sh
Prerequisite: Non-Biology majors only
A study of the functional systematic anatomy of the human. Lab studies center on nonhuman mammals whose anatomy is then related to the human condition.

BIOL 151 Human Physiology 3c-2l-4sh
Prerequisites: BIOL 105, non-Biology majors only
Deals with acquiring, through lecture presentations and laboratory experiments, an understanding of the basic functions and control of the major organ systems of the human body. Organ systems examined include the following: muscular system, cardiovascular system, respiratory system, endocrine system, renal system, digestive system, reproductive system, and nervous system.

BIOL 155 Human Physiology and Anatomy 3c-3l-4sh
Prerequisite: Non-Biology majors only (Food and Nutrition, Dietetics, Family and Consumer Sciences Education, Physical Education, and Safety Sciences majors)
A study of structure and function of the human body. An emphasis is on normal function, with particular attention to functional anatomy, control mechanisms, and interrelationships among systems. Laboratory studies will include experimentation and dissection. For students with little or no science background.

BIOL 210 Botany 2c-3l-3sh
Prerequisites: BIOL 111-112 or permission of instructor
A survey of the major plant groups, their physiology, structure, life cycles, evolution and ecology, and economic roles of plants. Combined lecture-laboratory.

BIOL 220 General Zoology 2c-3l-3sh
Prerequisites: BIOL 111-112 or permission of instructor
An examination of the evolution, form, and function of all major animal phyla, from sponges through chordates. Interactive lecture-laboratory sessions follow a phylogenetic approach to the Animal Kingdom and incorporate essentials of animal ecology, physiology, functional morphology, and behavior.

BIOL 232 Fundamentals of Microbiology 2c-3l-3sh
Prerequisites: CHEM 101 or equivalent, non-Biology majors only (Food and Nutrition, Dietetics, Family and Consumer Sciences Education, and Hotel, Restaurant, and Institutional Management majors)
A study of microorganisms and the role they play in water, food disease, and infection. Food spoilage, poisoning, and disease are emphasized. General methods and techniques are emphasized in the laboratory.

BIOL 241 General Microbiology 2c-3l-3sh
Prerequisites: Non-Biology majors only (Environmental Health, Nursing, and Respiratory Therapy majors), BIOL 105, CHEM 101, or equivalent
A study of microorganisms and the role they play in water, soil, food, and infection. Microbes and disease will be emphasized. Standard methods and techniques are emphasized in laboratory

BIOL 242 Comparative Vertebrate Anatomy 2c-3l-4sh
Prerequisites: BIOL 220
An investigation of the comparative structure and function of the vertebrate body with an emphasis on the diverse solutions to the problem of design for survival and the evolutionary mechanisms that provide those solutions. Meets twice per week for two and one-half hours. Each meeting will include both lecture and laboratory experiences. (Offered as BI 432 prior to 1999-2000)

BIOL 250 Principles of Microbiology 2c-3l-3sh
Prerequisites: BIOL 111-112 or permission of instructor
A study of the structure, nutrition, and biochemical activities of microbes. A survey of viruses, blue-green bacteria, bacteria, algae, fungi, and protozoa and their diversity in natural environments. Course designed for biology and biology education majors.

BIOL 251 Field Botany 2c-3l-3sh
Prerequisite: BIOL 210
The collection, preservation, identification, and distribution of selected herbaceous and woody plants of Western Pennsylvania. An emphasis will be on taxonomic principles, the use of keys and manuals, and the recognition of local flora.

BIOL 252 Field Zoology 2c-3l-3sh
Prerequisite: BIOL 220
Field natural history of vertebrates; identification, collection, and preservation techniques.

BIOL 261 Ornithology 2c-3l-3sh
Prerequisites: BIOL 111-112 or BIOL 103-104
A study of birds of the region. Indoor laboratory as well as early morning and possibly weekend field trips required.

BIOL 262 General Entomology 2c-3l-3sh
Prerequisite: BIOL 220
Morphology, anatomy, ecology, taxonomy, and economic and public health importance of insect orders, particularly those of Western Pennsylvania; student collection and field trips required.

BIOL 263 Genetics 2c-3l-3sh
Prerequisite: BIOL 111
Deals with the distribution and function of the hereditary material; special emphasis on microbial, viral, and molecular genetics.

BIOL 269 Bioethics and Coevolution 3c-0l-3sh
A discussion and exploration of the coevolution of humans and nature. Areas covered include the concepts of coevolution, bioethics, resource utilization, and possible future lifestyles. Designed for majors and nonmajors.

BIOL 271 Evolution 3c-0l-3sh
Prerequisites: BIOL 111-112 or BIOL 103-104, BIOL 263
Historical development of evolutionary thought; evidence and operational mechanisms involved; origin and phylogenetic relationships of biological groups.

BIOL 272 Conservation of Plant and Animal Resources 2c-3l-3sh
Prerequisites: BIOL 111-112 or BIOL 103-104
A study of accepted practices in soil, water, forest, and wildlife conservation. Saturday field trips.

BIOL 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

BIOL 310 Applied Entomology and Zoonoses 2c-3l-3sh
Prerequisite: BIOL 220 or permission
A study of the measures for abatement or control of arthropods, rodents, birds, and other disease vectors of public importance; selection, chemistry, formulation, and safe application of insecticides, rodenticides, and fumigants; pesticiding equipment; application of biological and other measures of control.

BIOL 321 Environmental Protection I 2c-3l-3sh
Prerequisites: BIOL 111-112, CHEM 112, Environmental Health majors only or permission of instructor
Considers the impact of important components of the physical environment on health and deals with principles and methods for identification, evaluation, and control of such health hazards. Major attention to principles and methods of epidemiological investigation. Major credit only for Environmental Health majors.

BIOL 322 Environmental Protection II 2c-3l-3sh
Prerequisites: BIOL 111-112, CHEM 112, Environmental Health majors only or permission of instructor
Subjects receiving attention include water and food supplies, domestic and industrial sewage and wastes, housing, accidents, community air pollution, domestic and industrial poisons, ionizing radiations, and occupational health hazards.

BIOL 331 Animal Developmental Biology 2c-3l-3sh
Prerequisite: BIOL 220 or permission
Comparative and molecular development of vertebrate animals are the major considerations. General principles of development are illustrated using vertebrate, invertebrate, and plant materials.

BIOL 350 Cellular Physiology 2c-3l-3sh
Prerequisites: BIOL 111, CHEM 231
Topics include cell membrane systems, bioenergetics, and information processing systems as well as growth and differentiation of cells and their organelles. Complements plant and animal physiology and biochemistry.

BIOL 352 Comparative Animal Physiology 2c-3l-3sh
Prerequisites: BIOL 220, CHEM 231
A comparative study of homeostatic mechanisms and systems in animals and their relation to fundamental chemical and physical events in cells.

BIOL 362 Ecology 2c-3l-3sh
Prerequisites: BIOL 111-112, BIOL 210 or BIOL 220
A study of interrelations and adaptations of organisms; includes consideration of physical and biotic environmental factors. Field trips.

BIOL 363 Medical Microbiology 2c-3l-3sh
Prerequisite: BIOL 250 or permission
A study of disease caused by microorganisms with an emphasis on human pathogens. Both epidemiology and aspects of host-parasite relationships will be discussed. Lab stresses methods of isolation and identification of pathogens.

BIOL 364 Immunology 2c-3l-3sh
Prerequisites: BIOL 250, CHEM 232, or permission
Physical and chemical properties of antigens and antibodies; nature of antigen-antibody interactions; mechanism of antibody formation; and immune reaction and disease. Lab employs serological techniques.

BIOL 401 Laboratory Methods in Biology and Biotechnology 2c-4l-3sh
Prerequisite: CHEM 351
Theory and practice in a number of major analytical and preparative techniques currently in use in physiology, molecular biology, and biotechnology.

BIOL 425 Herpetology 2c-3l-3sh
Prerequisite: BIOL 220
A comprehensive survey of the classes Amphibia and Reptilia, including their classification, structure, origin, evolution, phylogenetic relationships, distribution, and natural history. Special emphasis is placed on the herpetofauna of Pennsylvania.

BIOL 450 Pymatuning: Field Studies var-3sh
During the summer session, various field courses are offered through the Pymatuning Laboratory of Ecology. The offerings will vary depending on the summer. Some of the possible offerings include Experimental Design, Fish Ecology, Behavioral Ecology, Aquatic Botany, and Ecological Genetics. Information regarding specific offerings available from Biology Department in spring.

BIOL 453 Plant Physiology 2c-3l-3sh
Prerequisites: BIOL 210, CHEM 231
Studies physiological processes occurring in plants considered in relation to growth, development, and ecology of plants.

BIOL 463 Limnology 2c-3l-3sh
Prerequisite: BIOL 362
An investigation into the physical, chemical, and biological aspects of inland waters and their interrelationships. In the laboratory the student will gain experience in the techniques involved in aquatic sampling and the analysis of data. (Saturday or Sunday labs may be required.)

BIOL 466 Principles of Virology 3c-0l-3sh
Prerequisite: BIOL 263 or equivalent course in Genetics, or CHEM 351 or equivalent course in Biochemistry, or permission of instructor
Topics include structure, classification, assay, and transmission of viruses; methods used in the study of viruses; viral replication, gene expression, and gene regulation; host-viral interactions and subviral pathogens.

BIOL 471 Dendrology of the Eastern U.S. 2c-3l-3sh
Prerequisite: BIOL 210 or permission of instructor
A comprehensive survey of the tree species in the eastern portion of North America with an emphasis on Pennsylvania forests.

BIOL 475 Mammalogy 2c-3l-3sh
Prerequisite: BIOL 220
A general discussion of mammals emphasizing systematics, distribution, and structural and functional modifications related to evolution of this group. Lab work samples numerous techniques that can be applied to mammalian biology.

BIOL 476 Parasitology 2c-3l-3sh
Prerequisite: BIOL 220
Structure, physiology, ecology, life cycles, pathology, and treatment of parasitic protozoa and flatworm and roundworm species of man. Dissection of hosts for parasites.

BIOL 480 Biology Seminar 1c-0l-1sh
A discussion of recent trends in biological thought and research. Students report on assigned readings and/or personal research.

BIOL 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Course varies from semester to semester covering diverse topics in specific areas of biology.

BIOL 482 Independent Study var-1-3sh
Prerequisites: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office. A 2.5 cumulative GPA and in major courses required.
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. Work is supervised by a faculty member but does not involve regular class or laboratory hours.

BIOL 493 Biology Internship var-3-12sh
Prerequisites: Biology major with at least 57sh, 2.5 cumulative GPA, and permission of the director of internships and the chairperson
Selected students have opportunity, under department supervision, to gain off-campus practical experience in area of interest. Only 6sh may be applied toward major; total number of semester hours will be decided in consultation involving student, his/her advisor, and director of internships.

BLAW Business Law

Department of Finance and Legal Studies
Eberly College of Business and Information Technology

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course. Business majors (except those majoring in Business Education) who have not achieved Junior Standing are normally not permitted to enroll in 300- or 400-level courses.

BLAW 235 Legal Environment of Business 3c-0l-3sh
Explores the current American legal system by providing students with an introduction to a variety of legal topics important to all individuals and businesses. Topics must include sources of law, the court system and basic procedures, tort law, criminal law, and contracts. Topics may also include legal research and intellectual property. Ethical issues and international law are integrated throughout the course.

BLAW 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered

under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

BLAW 336 Law of Business Organizations 3c-0l-3sh
Prerequisite: BLAW 235
A study of the law dealing with commercial paper, agency, partnerships, corporations, and bankruptcy.

BLAW 337 Consumer Law 3c-0l-3sh
Nature of law as it pertains to the consumer. Attention to consumer protection relationships; real and personal property; credit; environmental law; law pertaining to employment; landlord-tenant relationships; product liability; insurance; and family law.

BLAW 382 Real Estate Fundamentals 3c-0l-3sh
Designed to acquaint the student with the language, principles, and laws that govern the business of real estate. An emphasis will be on the underlying concepts of land, property, rights in realty, and the means, methods, and laws that govern the conveyance of these rights. Required course for taking the Pennsylvania Real Estate Sales Exam.

BLAW 383 Real Estate Practice 3c-0l-3sh
Prerequisite: BLAW 382
One of the two courses required by the Pennsylvania Real Estate Commission in order to take the Pennsylvania Real Estate Sales Licensing Exam. Topics include real estate brokerage, the real estate market, listing contracts, the Pennsylvania Real Estate Licensing and Registration Act and its rules and regulations, appraisal, property management, fair housing laws, ethical practices for real estate professionals, and real estate math.

BLAW 440 Business Negotiations 3c-0l-3sh
Prerequisites: BLAW 235, junior standing
Open to all majors meeting the prerequisites. Covers the basic theories and strategies of negotiation in the business environment and provides instruction and practice to develop negotiation skills. Focuses on the knowledge and skills needed in intercompany and intracompany negotiations. Focuses on neither collective bargaining nor labor negotiations.

BLAW 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

BLAW 482 Independent Study var-1-3sh
Prerequisites: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

BTED Business and Technology Education

Department of Technology Support and Training
Eberly College of Business and Information Technology

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course. Business majors (except those majoring in Business Education) who have not achieved Junior Standing are normally not permitted to enroll in 300- or 400-level courses.

BTED 101 Microbased Computer Literacy 3c-0l-3sh
An introductory course designed to provide students with a fundamental understanding of computers. Familiarizes students with the interaction of computer hardware and software. An emphasis is placed on the application of microcomputers, the use of productivity software (word processing, spreadsheet management, file and database management), and the social and ethical aspects of the impact of computers on society. Note: Cross-listed as COSC 101 and IFMG 101. Any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit. (Offered as BEDU 101 prior to 2001-02)

BTED 111 Foundations of Business Mathematics 3c-0l-3sh
Develops an understanding of numbers and knowledge of fundamental concepts in arithmetic and algebra in the solution of common and advanced problems encountered in business by the businessperson and consumer. Topics illustrating and emphasizing the application of business mathematics include methods used to compute interest discount, partial payments, discounting of notes and drafts, depreciation, amortization, sinking fund redemptions, effective rate of interest and preparation of statistical data. (Offered as BEDU 111 prior to 2001-02)

BTED 130 Keyboarding 1c-0l-1sh
Exception: Course is open to students in all colleges without restriction
Designed to provide students with the fundamental skills to keyboard information quickly and accurately in fourteen one-hour sessions. It is intended for the student who does not require the additional skills included in keyboarding and document formatting, such as letter formats, manuscript typing, and tabulation. Recommended for students in computer science, journalism, management information systems, criminology, etc. (Offered as BEDU 34 prior to 1998-99 and BEDU 130 1999-00 through 2000-01)

BTED 132 Computer Keyboarding and Formatting 3c-0l-3sh
Prerequisite: BTED 130 or successful completion of proficiency exam
Focuses on the development of correct techniques in keyboarding. The emphasis is on proofreading, formatting tabulations, business letters, business reports, business forms, rough drafts, and manuscripts; an additional emphasis on production, accuracy, and speed. (Offered as BEDU 132 prior to 2001-02)

BTED 201 Internet and Multimedia 3c-0l-3sh
Prerequisite: BTED/COSC/IFMG 101 or prior exposure to word processing and electronic mail
The major focus will be on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. This information literacy course is designed for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students will learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BTED/COMM/COSC/IFMG/LIBR 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.) (Offered as BEDU 201 prior to 2001-02)

BTED 250 Electronic Office Procedures 3c-0l-3sh
Prerequisite: BTED 131 or equivalent
A study of the theory and practice of the systems in an electronic office: records management, office environment, communication transmittal systems, reprographics, and office procedures. (Offered as BEDU 250 prior to 2001-02)

BTED 264 Office Procedures 3c-0l-3sh
Prerequisite: BTED 131 or equivalent
An advanced study of theory and practice in activities common to office records management; handling of mail; telephone and telegraph services; receiving callers; writing reports; dictation and transcription equipment; bank, financial, and legal transactions; shipping and receiving services; reference books; etc. (Offered as BEDU 264 prior to 2001-02)

BTED 273 Word Processing Applications 3c-0l-3sh
Prerequisite: BTED 131 or equivalent
Students will develop a high degree of proficiency in the use of word processors. The emphasis is on machine operations and production skills in formatting, text editing, and understanding word processing concepts. May not be used as a substitute for BTED/COSC/IFMG101. (Offered as BEDU 273 prior to 2001-02)

BTED 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students. (Offered as BEDU 281 prior to 2001-02)

BTED 311 Methods and Evaluation in Business and Marketing Education I 3c-0l-3sh
Prerequisites: PSYC 101, EDSP 102, and completion of the freshman and sophomore courses in the student's major areas
Includes general methods of teaching and evaluation plus methods and evaluation in basic business courses. Unit plans, lesson plans, and unit tests are emphasized. Techniques and procedures of teaching and classroom management are studied. Includes units in vocational education such as advisory committees, adult education, and federal legislation for funding. (Offered as BEDU 311 prior to 2001-02)

BTED 312 Methods and Evaluation in Business and Marketing Education II 3c-0l-3sh
Prerequisites: BTED 311, EDSP 102
The emphasis is placed on the development of methods and strategies for making effective classroom presentations and working with students in both the skill and cognitive areas. Students will be provided opportunities to undertake the many responsibilities assigned to the business classroom teacher. (Offered as BEDU 312 prior to 2001-02)

BTED 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students. (Offered as BEDU 481 prior to 2001-02)

BTED 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. (Offered as BEDU 482 prior to 2001-02)

BTST Technology Support and Training

Department of Technology Support and Training
Eberly College of Business and Information Technology

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course. Business majors (except those majoring in Business Education) who have not achieved Junior Standing are normally not permitted to enroll in 300- or 400-level courses.

BTST 101 Introduction to Business 3c-0l-3sh
An overview of the principles, practices, and methods common to most business firms in a private enterprise system. (Not open to juniors and seniors in Business) (Offered as ADMS 101 prior to 2001-02)

BTST 221 Business Technical Writing 3c-0l-3sh
Prerequisite: ENGL 101
Application of business and technical writing styles, letters, memos, reports, procedures, and manuals are some areas of concern. The emphasis will be on clear, concise writing style. (May not be used as a substitute for BTST 321) (Offered as ADMS 221 prior to 2001-02)

BTST 231 Speech Communication for Professionals 1c-0l-1sh
Students will study theory and principles of effective oral presentations in a professional setting. Content includes audience analysis, management of speech anxiety, topic selection and refinement, proper selection and use of visual aids, and speech forms. Students will build professional presentation skills as they fulfill course assignments to develop, critique, and deliver professional presentations. (Offered as ADMS 231 prior to 2001-02)

BTST 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students. (Offered as OSYS 281 prior to 2001-02)

BTST 301 Microcomputer Software Solutions 3c-0l-3sh
Prerequisite: BTED/COSC/IFMG 101 or permission of instructor
Advanced utilization of the microcomputer to enhance productivity of office employees: executive and managerial, professional, and support personnel through optimization of hardware and software. Comparative and evaluative techniques for appropriate selection and implementation of software. Operating environment, integrated suites, multimedia, Internet, and utility software will be emphasized. (Offered as OSYS 301 prior to 2001-02)

BTST 310 Telecommunications 3c-0l-3sh
Prerequisite: BTED/COSC/IFMG 101
Provides an introduction to telecommunications in the business environment. Includes an overview of electronic communication systems including a conceptual framework as well as hands-on experience. Concepts of telecommunications technology, applications, and management as they apply to business and industry will be addressed. (Offered as OSYS 400 prior to 2000-2001 and OSYS 310 during 2000-01)

BTST 311 Training Methods in Business and Information Technology Support 3c-0l-3sh
Prerequisites: PSYC 101, junior standing
Includes the application of theories of adult learning to planning, delivering, and evaluating training for education and information technology. A major emphasis is placed on the planning of instruction. Topics include needs assessment; live and mediated instruction; classroom management; evaluation and follow-up methods; and evaluation of training strategies. (Offered as OSYS 311 prior to 2001-02)

BTST 313 Office Systems Technologies 3c-0l-3sh
Prerequisite: Junior standing
The emphasis will be on systems hardware, especially the microcomputer. Concepts and design principles common to all microprocessors are studied. Auxiliary hardware, such as reprographics, printers, modems, scanners, and laser technology will be included. (Offered as OSYS 313 prior to 2001-02)

BTST 315 Records Administration 3c-0l-3sh
Prerequisite: BTED/COSC/IFMG 101 or permission of instructor
Development of the goal of records administration as a system including the input, process, and output components. Records creation, records classification systems, evaluation, retention programs, manual through automated information systems, image technology, form design, record control systems, records manuals, and disaster prevention and recovery will be discussed. (Offered as OSYS 315 prior to 2001-02)

BTST 321 Business and Interpersonal Communications 3c-0l-3sh
Prerequisites: ENGL 101, 202
A study of communication theory and principles as applied to business situations and practices; development of communication skills in areas of communication such as speaking, writing, listening, and nonverbal communicating. The emphasis will be on building effective interpersonal relations in a business environment. (Offered as ADMS 321 prior to 2001-02)

BTST 342 Intercultural Business Communication 3c-0l-3sh
Prerequisite: Junior standing
Provides an in-depth study and theoretical understanding of intercultural business communication, including international, national, ethnic, racial, and socioeconomic cultures. Students will explore practices, trends, and difficulties of people primarily identified with one culture, attempting to interact with people of another culture through speaking, listening, writing, and nonverbal means. Problems of intercultural communication situations for business will be pinpointed, elements of the problems clarified, and guidelines projected for problem mitigation. (Offered as ADMS 342 prior to 2001-02)

BTST 402 Website Development and Administration 3c-0l-3sh
Prerequisite: BTED/COMM/COSC/IFMG/LIBR 201 or instructor permission
Guides the student through a hands-on, step-by-step process of creating an attractive, well-designed website for an enterprise. The student will learn how to install and configure a WWW server, publish web pages using the latest tools, and set up mechanisms to manage and update a website and content. (Offered as OSYS 402 prior to 2001-02)

BTST 411 Microcomputer Support for Office Systems 3c-0l-3sh
Prerequisites: BTST 301, 313, and 400
Includes three dimensions of study relative to office systems—helpdesk management, training and development, and ergonomics. Incorporates practical applications for delivering technical support through the operation of a helpdesk. Requires development and delivery of technological applications and a field study of ergonomic office designs. (Offered as OSYS 411 prior to 2001-02)

BTST 412 Administrative Office Services 3c-0l-3sh
A presentation of fundamental principles and practices used in the development of an office. Specialized areas such as systems analysis, work simplification, forms design, information processing, office machines and equipment, records management, office design and layout, office location and physical environment, office supervision, office manuals, and development of office personnel will be discussed. (Offered as OSYS 412 prior to 2001-02)

BTST 413 Enterprise Technology Support 3c-0l-3sh
Prerequisites: BTST 313; COSC/IFMG 352; or permission of instructor
Provides a comprehensive and practical knowledge of enterprisewide technology. Topics covered include knowledge management, remote user support, teleconferencing, and network management and enhancement. Students will have hands-on experience working with software, customizing user environments.

managing technology security, and enhancing and troubleshooting the computing environment. (Offered as OSYS 414 prior to 2001-02)

BTST 480 Seminar in Business Technology Support 3c-0l-3sh
Prerequisite: Graduating seniors only or permission of instructor
The emphasis will be on the solving of office management problems. Provides an opportunity to integrate and apply the skills and knowledge previously gained in the Business Technology Support major. (Offered as OSYS 480 prior to 2001-02)

BTST 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students. (Offered as ADMS/OSYS 481 prior to 2001-02)

BTST 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. (Offered as ADMS/OSYS 482 prior to 2001-02)

BTST 493 Internship var-3-6sh
Prerequisites: Approval of internship coordinator, chairperson, and dean and 2.75 cumulative GPA and 3.0 GPA in Business
A supervised office experience program with an approved agency (business, industry, and government). (Offered as OSYS 493 prior to 2001-02)

CHEM Chemistry

Department of Chemistry
College of Natural Sciences and Mathematics

CHEM 101 College Chemistry I 3c-2l-4sh
Basic principles and concepts of inorganic chemistry are developed from the standpoint of atomic and molecular structure with illustrative examples from descriptive chemistry. The laboratory portion of the course illustrates physical and chemical properties in a qualitative and quantitative manner. Designed for selected majors within the College of Health and Human Services and to fulfill the Liberal Studies Natural Science Laboratory Sequence requirement.

CHEM 102 College Chemistry II 3c-2l-4sh
Prerequisite: CHEM 101
Basic fundamental principles and concepts of organic and biochemistry are developed. Deals primarily with structural features of organic compounds, the chemistry of functional groups, and practical examples and uses of organic compounds. The laboratory portion illustrates properties and reactions of representative organic compounds. Designed for selected majors within the College of Health and Human Services and to fulfill the Liberal Studies Natural Science Laboratory Sequence requirement.

CHEM 111 General Chemistry I 3c-3l-4sh
A lecture-discussion of principles of chemistry, including theory and applications. The lab illustrates principles discussed. Topics discussed include scientific measurements, simple definitions and concepts, the mole, stoichiometry, gas laws, electronic structure of the atom, bonding, thermochemistry, and descriptive chemistry of the elements.

CHEM 112 General Chemistry II 3c-3l-4sh
Prerequisite: CHEM 111
A continuation of General Chemistry I. Topics discussed include the solid and liquid state, solutions, kinetics, equilibria, acids and bases, solubility equilibria, thermodynamics, electrochemistry, and descriptive chemistry of the elements.

CHEM 113 Concepts in Chemistry 3c-3l-4sh
An introductory course for chemistry majors. Topics covered include atomic theory, an introduction to chemical reactions, stoichiometry, thermochemistry, chemical bonding, molecular geometry, kinetic-molecular theory of gases, the liquid and the solid states, and solution theory.

CHEM 114 Basic Inorganic Chemistry 3c-3l-4sh
Prerequisite: CHEM 113
Topics include chemical kinetics, equilibrium and thermodynamics, acids and bases, electrochemistry, coordination chemistry, and descriptive chemistry of selected elements.

CHEM 116 Basic Inorganic Chemistry 3c-3l-2sh
Prerequisites: CHEM 111 and 112
Required for chemistry majors who have taken CHEM 111 and 112. A systematic study of the chemistry of the elements will be presented in both the lecture and the laboratory. Also included will be the chemistry of coordination compounds. This course starts at the beginning of the second half of the spring semester and is taught concurrently with CHEM 111.

CHEM 231 Organic Chemistry I 3c-4l-4sh
Prerequisite: CHEM 112 or 114
A study of compounds of carbon, with a special emphasis on structure-reactivity relationships. Laboratory work emphasizes methods of separation and purification of organic compounds.

CHEM 232 Organic Chemistry II 3c-4l-4sh
Prerequisite: CHEM 231
A continuation of Organic Chemistry I with an introduction to spectroscopic techniques. Laboratory work emphasizes the synthesis of representative compounds.

CHEM 255 Biochemistry and Nutrition 3c-0l-3sh
Prerequisite: CHEM 102
For Family and Consumer Sciences Education majors. Studies chemistry and biological function of biologically active compounds with respect to nutritional requirements.

CHEM 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

CHEM 301 Chemistry Seminar 1c-0l-1sh
A discussion of current technical literature and current research problems of staff. Lectures by outside chemists and student presentations. Open to junior or senior chemistry majors and to others by permission of the chairperson.

CHEM 321 Quantitative Analysis 3c-4l-4sh
Prerequisite: CHEM 112 or 114
Theory and practice of quantitative analysis, including gravimetric and volumetric analysis; a special emphasis on perfecting student's laboratory techniques and application of general chemical knowledge through problem solving.

CHEM 322 Instrumental Analysis 3c-4l-4sh
Prerequisite: CHEM 341
Modern instrumental methods of chemical analysis. Student learns theory behind the instrument, principles of operation, interpretation of data obtained, and limitations of methods.

CHEM 323 Analytical Methods 3c-4l-4sh
Prerequisites: CHEM 112 and non-Chemistry major
Principles of precipitation, acid-base, oxidation-reduction, and equilibria are applied to problem solving and to laboratory determinations; instrumental methods of analysis, such as colorimetry, atomic absorption and flame emission, gas chromatography, etc.

CHEM 331 Organic Molecular Structure Determination 4c-var-3sh
Prerequisites: CHEM 231-232 (CHEM 232 may be taken concurrently)
Gives the student experience in systematic identification of various classes of organic compounds by both chemical and physical methods.

CHEM 335 Advanced Organic Chemistry 3c-0l-3sh
Prerequisites: CHEM 232 and 341
Selected topics of current interest covered. Possible topics include reaction mechanisms, molecular spectroscopy, stereochemistry, natural products, heterocyclics, polymer chemistry, and organic synthesis.

CHEM 340 Physical Chemistry for the Biological Sciences 3c-0l-3sh
Prerequisites: MATH 122 or 124 or 128, and PHYS 112 or 132; CHEM 232
A one-semester course for Biochemistry and Biology majors. Chemical thermodynamics, equilibria, kinetics; quantum mechanics; and spectroscopy especially as applied to biomechanical systems.

CHEM 341 Physical Chemistry I 4c-0l-4sh
Prerequisites: MATH 122, 124, or 128 and PHYS 112 or 132; CHEM 112 or 114
Chemical thermodynamics with applications to solutions, phase, and chemical equilibria-kinetic theory.

CHEM 342 Physical Chemistry II 3c-0l-3sh
Prerequisite: CHEM 341
A study of solids, liquids, surfaces, chemical kinetics, electrochemistry, atomic and molecular structure.

CHEM 343 Physical Chemistry Laboratory I 0c-3l-1sh
Prerequisites: CHEM 321, 341
Experiments illustrating application of fundamental laws to actual systems. Carries writing-intensive credit.

CHEM 344 Physical Chemistry Lahoratory II 0c-3l-1sh
Prerequisites: CHEM 342, 343
An extension of Physical Chemistry Laboratory I; experiments related to chemical kinetics, molecular spectroscopy, and other topics of physical chemistry.

CHEM 351 Biochemistry 4c-0l-4sh
Prerequisite: CHEM 231
A study of chemistry and biological functions of carbohydrates, lipids, proteins, minerals, vitamins, and hormones.

CHEM 410 Advanced Inorganic Chemistry Laboratory 0c-3l-1sh
Prerequisite: CHEM 322
A laboratory course in which the techniques used in the synthesis and characterization of inorganic compounds will be explored. An emphasis will be placed on the preparation of a wide variety of inorganic compounds and the methods by which they are identified and characterized.

CHEM 411 Advanced Inorganic Chemistry 3c-0l-3sh
Prerequisite: CHEM 341
Gives understanding of advanced theories of atomic structure, chemical bonding, acids and bases, coordination compounds, and selected topics.

CHEM 412 Advanced Structural and Synthetic Methods in Inorganic Chemistry 2c-2l-3sh
Prerequisites: CHEM 411 and either CHEM 410 or 322
Advanced techniques used in the synthesis and characterization of inorganic compounds will be explored. In lecture, an emphasis will be placed on the theory and application of structural and spectroscopic methods of characterization. In lab, an emphasis will be placed on advanced methods of synthesis and structural characterization using representative examples of important classes of inorganic compounds.

CHEM 421 Advanced Instrumental Analysis 4c-var-3sh
Prerequisite: CHEM 322
A study of modern chemical analysis, using advanced instrumental techniques; with an emphasis on theory, principles of operation, capabilities, and limitations of advanced analytical instruments used.

CHEM 441 Advanced Physical Chemistry 3c-0l-3sh
Prerequisite or corequisite: CHEM 342
A study of fundamental ideas of quantum and statistical mechanics, molecular structure, and other topics of current interest.

CHEM 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

CHEM 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

CHEM 493 Internship in Chemistry var-4-9sh
Prerequisites: CHEM 113, 114, 231, 232, 321, 341, and departmental approval
Full-time involvement in an actual "on-the-job" situation in an industrial or research laboratory under the tutelage of a selected preceptor. A department faculty member will work closely with the student and preceptor and will assume responsibility for making the final evaluation and assigning a grade.

CHEM 498 Problems in Chemistry var-1-2sh
Prerequisite: Permission of chairperson
A course of independent study on selected problems, including lab work, library reading, and conferences with staff member. A minimum of 4 hours per week required per credit.

CNSD Counseling and Student Development

Counseling and Student Development Center
Student Affairs Division

CNSD 150 Life Skills: Improving your Social and Emotional Intelligence 1c-0l-1sh
Prerequisite: Permission of instructor
Provides students with practical, hands-on cognitive, emotional, and interpersonal skills which will help them to increase their abilities to process and respond to environmental demands and stresses of their social and academic environment. These skills include mindfulness, emotion regulation, behavior management, and handling relationships by understanding emotions in others. The goals will be to understand basic principles of emotion regulation and interpersonal effectiveness, improve students' ability to focus, and attend to one's own thoughts and feelings as they apply to the skills described above.

CNSV Consumer Affairs

Department of Human Development and Environmental Studies
College of Health and Human Services

CNSV 101 Personal and Family Management 3c-0l-3sh
Management as a system and its relationship to individuals and families. Formulation of goals, values, and standards; use of decision-making process; utilization of resources.

CNSV 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

CNSV 315 Consumer Economics and Family Finance 3c-0l-3sh
Economic, sociological, and psychological principles are applied to family money management problems. Information needed to manage finances effectively and to become a rational consumer is presented.

CNSV 413 Problems in Consumer Economics 3c-0l-3sh
Prerequisite: CNSV 315 or Economics
Problems of consumer-seller relationships studied with an emphasis given to effects of current economic and social forces. Governmental and private protection agencies which aid the consumer are reviewed. Individual investigations required. Taught Fall semester only.

CNSV 416 Problems in Family Finance 3c-0l-3sh
Prerequisite: CNSV 315
In-depth theories and principles in personal and family finance and the rights and responsibilities of consumers are emphasized. Opportunities are provided for students to explore specific areas of interest. Taught Spring semester only.

CNSV 421 Senior Seminar 2c-0l-2sh
Prerequisite: Completion of 90sh
Knowledge gained in major and outside concentration courses is applied to individual career goals. Students have the opportunity to pursue related areas not directly covered in previous coursework, with an emphasis upon independent research, analytical thinking, and communications skills.

CNSV 433 Study Tour var-1-6sh
Prerequisite: Upper-level standing
An opportunity is provided to visit business establishments and cultural centers concerned with household equipment, furnishings, textiles, clothing, and housing in America as well as abroad. Museums, factories, designers' showrooms, distribution centers, stores, cultural events, and seminars are included. May be repeated for a total of 6sh. (Cross-listed as FSMR/INDS 433.)

CNSV 481 Special Topics var 1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

CNSV 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Particular consumer considerations are independently investigated in the area of housing, home equipment, interior design, clothing, and textiles or in the management of resources. Course may be repeated for a total of 3sh. Students meet with a faculty member at least 5 hours per semester hour.

CNSV 493 Internship var-1-12sh
Prerequisites: Approval of instructor and department chairperson; upper-level standing
A practical experience related to the student's major area of study with objectives, supervised experience, and evaluation. Course may be repeated for a total of 12sh.

COMM Communications Media

Department of Communications Media
College of Education and Educational Technology

COMM 101 Communications Media in American Society 3c-0l-3sh
Required of Communications Media majors. An introduction to the evolution, status, and future of communications media. Students explore intrapersonal communication through self-assessment, values clarification, and feedback; interpersonal communication through interviews, observations, case studies, and gaming; and mass communications through the examination of the processes and the technology utilized to disseminate and manage information. Career paths, field applications, professional associations, and the primary literature are investigated. (Previous title: Survey of Communications Media)

COMM 103 Digital Instructional Technology 3c-0l-3sh
Prerequisite: Education major
Introduces freshman pre-service teachers to the ever-changing world of digital instructional technology. Learners will be exposed to computer-based tools of the trade used by teachers in the delivery and management of instruction. Does not count towards semester hours needed for Communications Media major.

COMM 150 Aesthetics and Theory of Communications Media 3c-0l-3sh
Prerequisite: COMM 101
Examines the theoretical assumptions of sight, sound, and motion as applied to the design of communication products for different media formats. Within the course, strategies for creative composition are demonstrated. Psychological and physiological implications of images are discussed. (Offered as CM 200 Images prior to 1999-2000)

COMM 201 Internet and Multimedia 3c-0l-3sh
Prerequisite: BTED/COSC/IFMG 101 or prior exposure to word processing and electronic mail
The major focus will be on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. This information literacy course is designed for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students will learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BTED/COMM/COSC/IFMG/LIBR 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

COMM 205 Media Presentation Skills 3c-0l-3sh
Prerequisites: COMM 150, COMM majors only
Introduces students to basic presentation skills, emphasizing the use of media to enhance presentations. Students will research, organize, and write presentations, design appropriate media, and deliver presentations in various settings, including to large groups, on camera and in groups with other students.

COMM 230 Issues in International Communication 3c-0l-3sh
A survey of international communications with particular emphasis on communications flow, four-press theories, ownership, structure and access to media, government/media relationships, and the impact of communications on developed and developing countries.

COMM 240 Communications Graphics 3c-0l-3sh
Prerequisite: COMM 101 or permission
An introduction to graphic design concepts and related processes and techniques for a variety of forms of presentation media including television, multimedia, and on-line communications for educational, corporate training, and communications specialists. Both two- and three-dimensional design, and basic animation concepts will be explored. Hands-on experiences using a variety of graphic software applications. (Offered as CM 140 prior to 1999-2000)

COMM 249 Basic Audio Recording Techniques 3c-0l-3sh
Prerequisites: COMM 101, permission
Theory and practice of recording sound, developing an understanding of the language of sound recording as well as the ability to make sound recordings. Offers exposure to recording for various media including radio, music, motion pictures, television, and multimedia production. Material also appropriate for teachers who wish to make use of tape recorder in the classroom. Students will gain hands-on experience through labs and projects to be completed outside of class. Students will be expected to provide an audio tape recorder. (Offered as CM 449 prior to 1999-2000)

COMM 251 Television Production 3c-0l-3sh
Prerequisites: COMM 101, permission
Develops basic skills in television production and direction. Consideration of operating problems of a television studio, as well as functions, limitations, and capabilities of television equipment and facilities. (Offered as CM 451 prior to 1999-2000)

COMM 271 Beginning Photography 3c-0l-3sh
Prerequisite: COMM 101 or permission
Working with black-and-white materials, the student learns to operate a camera, develop film, make contact prints and enlargements, and mount prints for display. Ancillary topics are introduced such as filtration, print spotting, flash, and the use of accessory lenses. Student is required to have a 35mm camera, preferably a single-lens reflex, with fully manual focusing and exposure capability.

COMM 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

COMM 302 Research in Communications Media 3c-0l-3sh
Prerequisites: COMM 150, ENGL 101 and 202 (Grade of C or better)
Designed to provide knowledge of the resource materials and research strategies used in the communications media field. Students will design basic data gathering instruments, collect data, and assimilate information from various sources and data into communication products, services, or documents.

COMM 303 Scriptwriting 3c-0l-3sh
Prerequisites: COMM 101, ENGL 101 and 202 (Grade of C or better) or permission of instructor
An introduction to the design of media materials and script writing. Style and techniques of writing will be analyzed. Classroom emphasis is on writing, critiques, and revision of designs and scripts. Scripts for audio, multimedia presentations, and motion picture and television productions will be written.

COMM 305 Electronic Media Programming and Sales 3c-0l-3sh
Prerequisite: COMM 150
Explores two primary functions of the electronic media: providing programming for audiences and providing economic viability to media outlets by selling commercial time to clients. Students will explore topics such as program development, scheduling, and promotion. Also explores the basic strategies used in the electronic media to sell commercial time and the use of audience and ratings analysis in the processes of programming and sales.

COMM 330 Instructional Design for Training and Development 3c-0l-3sh
Prerequisites: COMM 101, 240, ENGL 101 and 202 (Grade of C or better) or permission
Examines the systems approach for the design, development, and evaluation of instructional material. Students will learn about the history of instructional design and development and the current status of the field. Each student will produce a self-instructional prototype that will require the student to systematically and creatively apply the concepts and rules learned in the class. (Previous title: Communications Media in Training and Education)

COMM 335 Communications Consulting and Project Management 3c-0l-3sh
Prerequisite: COMM 101
Presents the theoretical views and clinical applications of consulting skills and practices associated with and needed by communication professionals. Presented will be the functions and role of the consultant, the client's perspective on consulting, hiring a consultant, ethics in consulting, personal assessment tests, and related literature and models.

COMM 340 Advanced Communication Graphics 3c-0l-3sh
Prerequisites: COMM 240, permission
Provides in-depth experience in planning and preparing graphic materials commonly used in the communications profession; graphic materials include design, photosketching, lettering, slide titling and duplication, preparation of camera-ready art, lithographic film and master layout sheets, professional slide flat production and photocopy, large-format transparency production, color key, and color systems. (Offered as CM 441 prior to 1999-2000)

COMM 345 Television Criticism 3c-0l-3sh
Prerequisite: COMM 150 or permission of instructor
The medium of television offers a unique environment for development and delivery of information, entertainment, and news. Explores and analyzes television programming. Includes examination of genres ranging from situation comedy to drama, to mini-series and made-for-TV movies.

COMM 349 Radio Production 3c-0l-3sh
Prerequisite: COMM 150 or permission of instructor
An introduction to production techniques as they pertain to radio. The student will be exposed to programming, scripting, producing programs, intros, outros, commercials, public service announcements, station identifications, and promotional announcements. Also deals with the interaction of a radio station with national networks and with the real-life concerns of deadlines. (Offered as CM 405 prior to 1999-2000)

COMM 351 Advanced Video Production 3c-0l-3sh
Prerequisites: COMM 251 and COMM 303 or 403
A production course that emphasizes advanced field production techniques. Some of the topics covered will include field lighting, video post-production editing with A-B roll, on-line editing, and nonlinear editing. Students will gain hands-on experience through projects and field trips.

COMM 354 Broadcast Regulation 3c-0l-3sh
Prerequisite: COMM 150 or permission of instructor
Delves into the areas of law affecting broadcasters. Topics covered are laws pertaining to cable television, station licensing and renewal, political broadcasting, libel, copyright, the right of reply, and privacy. The historical development of the FCC and its jurisdictions will also be examined. Case studies will be discussed along with the relevancy of some laws as they pertain to today's society. (Offered as CM 454 prior to 1999-2000)

COMM 371 Photography II: The Print 3c-0l-3sh
Prerequisites: COMM 271, permission
Students will develop camera and print-making skills to the degree that they can produce salon-quality photographic prints. Students will understand the photographic processes utilized in producing a high-quality negative and print to the extent that they can manipulate those processes to communicate an intended message with their photographs. An emphasis will be on camera and print control as well as composition and negative and print manipulation. (Offered as CM 472 prior to 1999-2000)

COMM 375 Mass Media and Behavior 3c-0l-3sh
Prerequisites: PSYC 101 and junior or senior status
Theory and research on the influence of the mass media on human behavior and attitudes. Topics include the effects of news and political advertising on public opinion; the effects of racist and sexist portrayals; and the effects of violence and pornography on aggressive behavior. (Also offered as PSYC 375; may be taken only once)

COMM 380 The History of African Americans in Film 3c-0l-3sh
Traces the historical development of the roles of African Americans in film and television. Students examine the early stereotypic portrayals of this group, the origins of these stereotypes, and the ongoing changes, positive and negative, that have occurred regarding the media representation through research, film, and archetypal analysis, observation, and discussion. The new generation of African American filmmakers and their creative efforts to promote more realistic portrayals are analyzed.

COMM 390 Practicum in Communications var-1-3sh
Prerequisites: COMM 101, written permission
An opportunity with credit for students to make contributions to department and campus media-related facilities and offices including WIUP-TV, WIUP-FM, *Penn*, Public Relations, and Media Resources. Repeatable for a maximum of 6sh.

COMM 395 Career Planning in Communications Media 1c-0l-1sh
Prerequisite: Minimum 20 COMM semester hours
Serves as a primary skill-building and strategy-seeking experience for the internship program and later career entry and growth. Extensive writing, research, and individual counseling are involved. Travel may be necessary.

COMM 403 Broadcast Newswriting 3c-0l-3sh
Prerequisites: COMM 101, ENGL 101 and 202 (Grade of C or better) or permission of instructor
Acquaints students with the various styles and script formats used in writing news scripts for radio and television. Includes instruction in writing news stories for radio and television and an introduction to broadcast news production. Students will practice and work to improve writing skills in this area of broadcast writing.

COMM 408 Media Field Studies 3c-0l-3sh
Prerequisites: COMM 101, junior standing, and permission of instructor
A hands-on course designed to help the students learn about the production process involving on-location production. Will have three distinct phases: students will begin with research and pre-production tasks on campus; students may travel to a remote site to collect additional information and images and use those images to complete a production; and students will be responsible for travel expenses. (Offered as CM 401 prior to 2000-2001)

COMM 440 Multimedia Production 3c-0l-3sh
Prerequisite: COMM 240 or permission of the instructor
The student will learn the processes and techniques of planning, designing, and producing used with interactive multimedia. Provides hands-on experiences in the use of graphics, audio, animation, video, and authoring software applications to produce an aesthetically acceptable product that meets specific objectives. Designed to meet the needs of educational media, corporate training, and communications specialists.

COMM 445 Applications and Techniques of Motion Pictures 3c-0l-3sh
Prerequisite: COMM 150 or permission of instructor
A survey of the role that motion picture film production plays in society. A major emphasis will be placed on the variety of applications with special consideration given to motion pictures as a tool to support research.

COMM 449 Advanced Audio Recording Techniques 3c-0l-3sh
Prerequisites: COMM 249, permission
Sound recording utilizing advanced techniques and concentrating on specific applications. Student participates in an intensive lab experience utilizing the most advanced equipment available. The emphasis will be on application, editing, signal processing, and multi-track recording. Student is expected to produce a sound recording for a specific use of professional quality. (Offered as CM 450 prior to 1999-2000)

COMM 451 Broadcast News Process 3c-0l-3sh
Prerequisites: COMM 251, 349, permission
Reporting and presenting radio and TV news programs. Analysis of news and public affairs broadcasting. (Offered as CM 453 prior to 1999-2000)

COMM 460 Emerging Trends in Communication Technology 3c-0l-3sh
Prerequisites: COMM 150
An introduction to the ever-changing world of telecommunication technologies, focusing on modern, computer-driven modes of information exchange. Students will get an opportunity to synthesize several of the technologies covered in the course and integrate them into a workable solution to a practical telecommunication problem. (Previous title: Alternative Systems of Communications)

COMM 470 Management Practices in Electronic Communications 3c-0l-3sh
Prerequisites: COMM 150, any COMM Writing Intensive course, and junior or senior standing
Presents the theory and practice of media management. Areas covered will include problem-solving, documenting and reporting, career systems, budgeting, personnel, ownership, unionization, market analysis, and special topics as directly related to communications media industries. Students will conduct case study research related to their career direction.

COMM 471 Electronic Imaging 3c-0l-3sh
Prerequisite: COMM 271 or permission
An introduction to the use of electronic still photography (ESP) for the capture, recording, and transfer of still images and the use of computers for the storage, manipulation, and output of color and black and white photography. Extensive training in the use of software packages for image enhancement, restoration, and manipulation will be provided. Students will learn the applications of this

technology to the print media and will examine the ethical and legal issues of image manipulation. (Offered as CM 479 prior to 1999-2000)

COMM 475 Senior Portfolio Presentation 1c-0l-1sh
Prerequisites: Communications Media majors only, 21 COMM semester hours, and COMM 395
Students will compile and present a series of works produced through previous Communications Media courses and activities. The result will be a portfolio suitable for presentation to a potential employer. The portfolio may include examples of student works from a variety of subject areas.

COMM 480 Seminar in Communications Media 3c-0l-3sh
Prerequisites: COMM 302, junior or senior standing, other prerequisites as appropriate to course content.
A seminar in selected communications issues or problems. Includes the reading and review of the current literature as appropriate to the major topic presented in the seminar. Students will be involved in the research and oral defense of a major research paper.

COMM 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

COMM 493 Internship var-6, 9, 12sh
Prerequisites: COMM 395, department approval
Supervised professional summer work experience in communications media. Sites reflect the academic goals of the department and are approved and administered by a department coordinator. Location, duties, length of internship, and hours are individually tailored to student career goals. Sites represent wide application of process and technology of communications in business, education, allied health, or other agencies. Students must complete 40 hours of the internship work experience per semester hour earned. A maximum of 15sh is applicable to an undergraduate degree program from any combination of internship and practicum experience.

COSC Computer Science

Department of Computer Science
College of Natural Sciences and Mathematics

COSC 101 Microbased Computer Literacy 3c-0l-3sh
An introductory course designed to provide students with a fundamental understanding of computers. Familiarizes students with the interaction of computer hardware and software. An emphasis is placed on the application of microcomputers, the use of productivity software (word processing, spreadsheet management, file and database management), and the social and ethical aspects of the impact of computers on society. (Does not count toward Computer Science major.) Note: Course is cross-listed as BTED 101 and IFMG 101. Any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

COSC 105 Fundamentals of Computer Science 3c-0l-3sh
The first course for Computer Science majors. Required of all Computer Science students and appropriate for other Natural Sciences and Mathematics students. Topics include the fundamental concepts of computer architecture, algorithm development and analysis, programming languages, software engineering, data organization and representation, and systems software. Hands-on introduction to computer usage with an emphasis on terminology and the underlying connections within the discipline.

COSC 110 Problem Solving and Structured Programming 3c-0l-3sh
For Science, Mathematics, and Computer Science majors and for others who have a sufficiently quantitative orientation. Basic structure of modern digital computers; problem analysis and computer solution using flowcharting and the C++ language. Exemption or credit by examination possible.

COSC 201 Internet and Multimedia 3c-0l-3sh
Prerequisite: BTED/COSC/IFMG 101 or prior exposure to word processing and electronic mail
The major focus will be on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. This information literacy course is designed for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students will learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BTED/COMM/COSC/IFMG/LIBR 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

COSC 205 Programming Languages for Secondary Education 3c-0l-3sh
Prerequisite: Education major
Provides an introduction to the three high-level programming languages most commonly used in secondary education: Pascal, LOGO, and BASIC, with particular emphasis on Pascal. Also includes a comparative study of the control structures and data structures present in these three languages. Intended to establish a solid foundation to prepare prospective teachers of computing courses K-12 (Note: Previous experience with microcomputers is strongly recommended. Does not count toward a Computer Science major. Credit toward graduation will not be given if this course is taken after completing 6sh or more of COSC courses.)

COSC 220 Applied Computer Programming 3c-0l-3sh
Prerequisite: COSC 110 or equivalent
Structured programming principles and techniques, as implemented through the ANS COBOL language; program design using top-down techniques; program and project documentation; introduction to sequential file algorithms.

COSC 250 Introduction to Numerical Methods 3c-0l-3sh
Prerequisites: COSC 110, MATH 122 or 123 or 127
Algorithmic methods for function evaluation, roots of equations, solutions to systems of linear equations, interpolation, curve fitting, numerical differentiation and integration; errors in computation. Introduction to FORTRAN90 programming and introduction to the use of a mathematical software package to graph functions.

COSC 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

COSC 300 Assembly Language Programming 3c-0l-3sh
Prerequisite: COSC 110 or equivalent
An examination of structure and languages of machines; representation of data, addressing techniques, symbolic coding, assemblers, macros, etc.; problem solution using assembly language.

COSC 304 Interactive Internet Programming with Java 3c-0l-3sh
Prerequisite: COSC 110 or equivalent
An introduction to interactive Internet programming using Java. The focus is on writing platform-independent multimedia applications that are useable across the Internet. Uses a write-once, run-anywhere approach while providing adequate security. Covers event-based processing, multithreading, MIME file handling, exception handling, sandbox security, networking, and component architectures.

COSC 310 Data Structures 3c-0l-3sh
Prerequisite: COSC 110
Basic concepts of data; storage systems and structures; lists, arrays, strings, hashing techniques; searching and sorting techniques; data structures in programming languages; string processing. Programming in an object-oriented language.

COSC 315 Large File Organization and Access 3c-0l-3sh
Prerequisite: COSC 220
The organization of large computer files for business systems, information systems, and other applications. Use of advanced COBOL for efficient file access. Evaluation of file access methods and directory organization. Introduction to random file algorithms and integrated file systems.

COSC 319 Software Engineering Concepts 3c-0l-3sh
Prerequisite: COSC 315 or permission of instructor
Includes the collection of tools, procedures, methodologies, and accumulated knowledge about the development of the software life cycle; current methodologies, tools, and techniques being applied to each phase will be discussed in depth with localized exercises given to reinforce learning of concepts.

COSC 320 Software Engineering Practice 1c-2d-3sh
Prerequisite: COSC 319 or permission of instructor
Planning, design, and implementation of large software systems using software engineering techniques. Students work in project teams on real or realistic software development projects. Credit for either COSC 320 or 493 may count toward computer science major requirements for graduation but not both; the other course semester hours are free electives.

COSC 345 Data Communications 3c-0l-3sh
Prerequisites: COSC 110 or 220; MATH 121 or 123; MATH 214 or 216 or 217; or equivalents
Communication of digital data between computers and to and from terminals and other peripherals; computer networks; small design projects or term paper.

COSC 352 LAN Design and Installation 3c-01-3sh
Prerequisite: IFMG 350 or BTST 313 or any COSC course numbered 300 or higher
A study of fundamental local area networking concepts. Detailed study of the basics of local area network (LAN) technology. Comparative study of commercially available LAN systems and products. Features a hands-on laboratory implementation of a LAN. Cross-listed as IFMG 352. Either course may be substituted for the other for D/F repeats but may not be taken for duplicate credit.

COSC 354 Testing and Controlling LANs 3c-01-3sh
Prerequisite: COSC 352 or IFMG 352 or equivalent
Explores local area network (LAN) topologies and their associated protocols. Introduces ways of interconnecting, securing, and maintaining LANs. Provides students with hands-on experience in the interconnection of multiple LANs. Also presents a hands-on approach to design, testing, and administration of interconnected LANs. Cross-listed as IFMG 354. Either course may be substituted for the other for D/F repeats but may not be taken for duplicate credit.

COSC 355 Computer Graphics 2c-1l-3sh
Prerequisites: COSC 310 and junior status
The use of computer graphics hardware and software. An overview of current applications and experience with representative software will introduce current practice. Foundations in primitives, geometry, and algorithms of passive computer graphics are the principal focus of the course. A brief introduction to interactive computer graphics will be included.

COSC 360 IBM Job Control Language 1c-0l-1sh
Prerequisite: COSC 220 or permission of instructor
Detailed study of the job control language (JCRLG) of the IBM OS operating system; comparison of OS with the locally available DEC operating system, VAX VMS.

COSC 362 Unix Systems 3c-0l-3sh
Prerequisite: COSC 310 or permission of instructor
An introduction to the features, syntax, applications, and history of UNIX. Coverage includes utilities, system administration, development environments, and networking concerns including distributed systems, client-server computing, and providing Web services.

COSC 380 Seminar on the Computer Profession 0c-1d-1sh
Prerequisite: Permission
Reading, review, and discussion of the current literature of computer science and industry trade journals; effective oral presentations; employment prospects. Should be taken the semester before an internship or the first semester of the senior year. Should not be taken at the same time as COSC 480.

COSC 405 Artificial Intelligence 3c-0l-3sh
Prerequisite: COSC 310
An introduction to the field of artificial intelligence, i.e., the study of ideas that enable computers to process data in a more intelligent way than conventional practice allows. Covers many information representation and information processing techniques. Students will explore the underlying theory including matching, goal reduction, constraint exploration, search, control, problem solving, and logic.

COSC 410 Processor Architecture and Microprogramming 3c-0l-3sh
Prerequisites: COSC 300 and 310
The logical description of computer processor structure (architecture), with an emphasis on the microprogramming approach. Project assignments using minicomputer.

COSC 419 Software Development with Ada 3c-0l-3sh
Prerequisite: COSC 310
An introduction to the Ada programming language as a tool of the software engineer. Projects will use the advanced programming constructs resident in Ada, including packages, multi-tasking, generic units, exception handlers, and concurrent programming.

COSC 420 Modern Programming Languages 3c-0l-3sh
Prerequisites: COSC 220 and 310
A comparative study of the properties and applications of a range of modern higher-level programming languages, including Ada, APL, C, LISP, LOGO, Pascal, PROLOG, and SNOBOL. Comparison with older languages such as ALGOL, BASIC, COBOL, FORTRAN, and PL/I.

COSC 424 Compiler Construction 3c-0l-3sh
Prerequisites: COSC 300 and 310
Relates the formal concepts of automata and language theory to the practicality of constructing a high-level language translator. The structures and techniques used in lexical analysis, parsing, syntax directed translation, intermediate and object code generation, and optimization are emphasized.

COSC 430 Introduction to Systems Programming 3c-0l-3sh
Prerequisites: COSC 300 and 310
Concepts and techniques of systems programming with an emphasis on assembly, linking, loading, and macro processing for user programs. Overview of higher-level language translation and system control. Programming and research projects.

COSC 432 Introduction to Operating Systems 3c-0l-3sh
Prerequisites: COSC 300, COSC 310 or equivalents
An introduction to the principles of operating system design and implementation. Topics include interrupt service, process states and transitions, spooling, management of memory and disk space, virtual storage, scheduling processes and devices, and file systems.

COSC 441 Database Management 3c-0l-3sh
Prerequisite: COSC 315
A review of database concepts. Detailed study of database management approaches. Comparative study of commercially available database management systems. Project on the locally available database systems.

COSC 444 Productivity Tools and Fourth Generation Language 3c-0l-3sh
Prerequisite: COSC 441 or IFMG 450
Develop an understanding of productivity issues and how Fourth Generation Languages (4GL) improve productivity as contrasted with 3GLs. Advances in the programming paradigm such as event-driven programming, objects, reusability, graphical user interface (GUI) design and development, information systems based on relational databases, and client/server technology are addressed. Students will gain a practical experience with these concepts through an in-depth study of Visual Basic and the development of a GUI interface to a relational database using Visual Basic.

COSC 450 Applied Numerical Methods 3c-0l-3sh
Prerequisites: COSC 250, MATH 171, and MATH 241, or equivalents
Polynomial approximations using finite differences, with applications in numerical integration and differentiation. Numerical solution of initial value ordinary differential equations. The APL language will be introduced and used, along with FORTRAN, in programming selected algorithms.

COSC 451 Numerical Methods for Supercomputers 3c-0l-3sh
Prerequisites: MATH 121 and 122, or MATH 123 or 127, MATH 171, COSC 250
Supercomputers make use of special computer architectures—vector and parallel processors—in order to achieve the fastest processing speed currently available. Students will be introduced to these features and will learn how numerical algorithms can be constructed to exploit supercomputers' capabilities. Students will gain practical experience in programming for the Cray, YMP, in incorporating existing scientific software packages into user-written programs, in submitting remote jobs to the Pittsburgh Supercomputer Center, and in producing animated graphical output to summarize the typically large volume of output data generated by large scientific programs. (Also offered as MATH 451; may not be taken for duplicate credit)

COSC 460 Theory of Computation 3c-0l-3sh
Prerequisite: COSC 310 or consent of instructor
Formal methods for describing and analyzing programming languages and algorithms. Backus-Naur forms; productions; regular expressions; introduction to automata theory; Turing machines; recent concepts in algorithm theory computability.

COSC 480 Seminar on Technical Topics 0c-1l-1sh
Prerequisites: See text below
Reading, review, and discussion of the current literature of computer science and industry professional and technical journals; oral presentations. Should be taken the last semester of the senior year. Should not be taken at the same time as COSC 380.

COSC 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
A seminar in advanced topics of computer science, content will vary depending on interests of instructor and students. May be repeated for additional credit. Special Topics numbered 481 are primarily for upper-level undergraduate students.

COSC 482 Independent Study var-1-4sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval based on academic appropriateness and availability of resources.

COSC 485 Independent Study var-12sh
Prerequisites: Permission of a computer science faculty member who agrees to supervise the student's project. Arrangements for selection of a specific topic must be made.

COSC 493 Internship in Computer Science var-12sh
Prerequisites: COSC 300, 310, 315, 319, 380, other courses depending on type of internship position desired, completion of application, and selection by committee
Positions with participating companies provide students with paid experience in computer science under the supervision of the companies and faculty. Requirements include three on-site consultations, two university consultations, completion of progress reports, oral presentation, and a final cumulative paper. Offered only to students during the second semester and summer of the junior year or the summer and the first semester of the senior year. No more than 4sh of COSC 493 may be applied toward the semester-hour requirements for the major in Computer Science.

COUN Counselor Education

Department of Counseling
College of Education and Educational Technology

COUN 250 Developing Interpersonal Relationship Skills 1c-01-1sh
Teaches interpersonal relationship skills: listening, communicating, group dynamics, decision making, leadership, assertiveness, time-use management, problem solving, and conflict resolution. Restricted to residence hall counselors.

COUN 253 Counseling in School Settings 3c-01-3sh
An elective course designed to provide in-service teachers and school personnel, other than counselors, with a basic understanding of the knowledge, information, and skills appropriate to counseling with individuals and groups. Restricted to peer tutors.

COUN 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

COUN 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

COUN 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

CRIM Criminology

Department of Criminology
College of Humanities and Social Sciences

CRIM 101 Crime and Justice Systems 3c-01-3sh
Introduces the field of criminology through the examination of historical data, statistical information, theories of criminal causation, social control of behavior, development of laws, evaluation of criminal justice system policies, procedures, and trends. Students will learn the terminology of the field, gain an awareness of the methods of inquiry utilized in the field, and have the opportunity to examine personal attitudes and values regarding crime and responses to crime.

CRIM 102 Survey of Criminology 3c-01-3sh
Provides an understanding of the discipline of criminology through an examination of its theories, basic assumptions, and definitions.

CRIM 210 Criminal Law 3c-01-3sh
A study of the history and sources of criminal law coupled with an analysis of the substantive elements of specific crimes.

CRIM 260 Criminal Procedure and Admissibility of Evidence 3c-01-3sh
Law of arrest, search, and seizure, with discussion of important case law. Analysis of safeguards established for protection of individual liberties.

CRIM 270 Juvenile Justice System 3c-01-3sh
A study of the agencies and processes dealing with juvenile justice in the United States.

CRIM 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

CRIM 283 Police Patrol Administration 3c-01-3sh
The study of the role and characteristics of the police patrol function. Special emphasis is given to understanding how patrol relates to other police functions and its effect on crime.

CRIM 291 Theory and Techniques of Interviewing 3c-01-3sh
Consideration of the theory, nature, methods, and principles of interviewing.

CRIM 295 Criminal Investigation 3c-01-3sh
The study of logical and scientific principles necessary for the detection and investigation analysis of criminal activities. Theories of information, interrogation, observation and interrogation, and observation and ethics are among the topics to be discussed.

CRIM 300 Theory of Complex Criminal Justice Organizations 3c-01-3sh
Prerequisite: CRIM 102 or permission of instructor
The study of the evolution and theories of organizational alternatives and their application to the administration of justice.

CRIM 306 Criminological Research Methods 3c-01-3sh
Prerequisite: CRIM 102 or permission of instructor
An introduction to the basic criminological research methods designed to prepare the student to understand and participate in quantitative and qualitative research.

CRIM 355 Crime in the Workplace 3c-01-3sh
The study of the theoretical and legal basis of crime in the workplace.

CRIM 357 Law, Social Control, and Society 3c-01-3sh
The evolution and development of the modern legal system. Topics include civil, criminal, and administration law, the legal profession, legal systems in American society, and the law as one of many instruments of social control and social change.

CRIM 361 Juvenile Law 3c-01-3sh
An analysis of pertinent juvenile law and procedure involving case study methods.

CRIM 370 Correctional Institutions 3c-01-3sh
An examination of the organization and function of correctional institutions. An emphasis is placed on various social processes and problems associated with incarceration.

CRIM 371 Community-Based Corrections 3c-0l-3sh
A survey of noninstitutional programs, focusing on alternatives to incarceration in community settings. Programs reviewed include prerelease, probation, parole, halfway houses, and restitution-based programs.

CRIM 383 Police Administration 3c-0l-3sh
A study of police management, structure, and operations and their roles in the quality of services delivered. The relationship between police administration and its social environment will be examined.

CRIM 386 Correctional Administration 3c-0l-3sh
A study of correctional management, structures, and operations and their roles in the quality of services delivered. The relationship between correctional administration and its social environment.

CRIM 388 Court Administration 3c-0l-3sh
A study of court responsibility within the criminal and civil justice systems; jurisdictions, policies, and management procedures in court administration.

CRIM 390 Women and Crime 3c-0l-3sh
A study of the nature and extent of women's crime, theories of female criminality, processing of women offenders through the criminal justice system, the response of police and court officials to women as victims of crime, and opportunities for women as employees in criminal justice agencies.

CRIM 391 Substance Use and Abuse in Criminal Justice 3c-0l-3sh
A study of substance use and abuse confronting American society. Alcohol and drug use and abuse education, philosophy, physiological effects, and social aspects will be examined in terms of control measures and public safety.

CRIM 400 Theoretical Criminology 3c-0l-3sh
A review and critical analysis of the major criminological theories beginning with the Classical School; psychological, sociological, economic, biological, and political theories of crime and its causes will be included.

CRIM 401 Contemporary Issues in Criminology 3c-0l-3sh
An examination of the nature and extent of crime in modern Western society. An emphasis will be placed on issues selected from, but not limited to, emerging patterns of violence, organized crime, white collar crime, victimless crime, corruption, and those crime control strategies deemed appropriate in a democracy.

CRIM 416 Criminal Justice Personnel and Supervision 3c-0l-3sh
A study of public personnel systems with specific application to criminal justice agencies. The role and function of supervision as a concept of a comprehensive personnel system as well as the relationship between agency personnel and the impact on crime will be examined.

CRIM 451 Etiology of Delinquent Behavior 3c-0l-3sh
An analysis of the prevalent theories of delinquency causation with a view toward developing prevention, control, and treatment approaches.

CRIM 470 Comparative Study of Justice 3c-0l-3sh
Comparison of American systems of administration of justice with those of other nations.

CRIM 480 Seminar in Criminology—The Administration of Justice 3c-0l-3sh
A study of selected topics in criminology—the administration of justice. May be taken more than once for a maximum of 6sh. Not for credit after prior CRIM 480.

CRIM 481 Special Topics in Criminology var-1-3sh
Prerequisite: Department consent
A seminar providing study of selected topics not emphasized in other courses. May be taken more than once to a maximum 6sh.

CRIM 482 Independent Study in Criminology var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

CRIM 491 Individual and Group Treatment Modalities 3c-0l-3sh
A study of the therapeutic techniques, process, and application used in various criminal justice environments.

CRIM 493 Internship var-3-12sh
A structured field placement designed to broaden the student's educational experience through observation and participation in work assignments in government or private sectors. 6sh of credit can be applied to the major requirements.

CRLG Critical Languages

College of Humanities and Social Sciences

Critical Languages are offered in four levels. See program description in the opening section of the College of Humanities and Social Sciences. Specific languages are offered as available.

CRLG 101 - 120 Critical Languages I 3c-0l-3sh
Basic vocabulary and pronunciation in the target language. Oral/aural skills are stressed.

CRLG 101	Arabic I
CRLG 102	Chinese I
CRLG 103	Dutch I
CRLG 104	Finnish I
CRLG 105	Hindi I
CRLG 106	Hungarian I
CRLG 108	Japanese I
CRLG 109	Korean I
CRLG 110	Modern Greek I
CRLG 111	Portuguese I
CRLG 112	Russian I
CRLG 113	Swedish I
CRLG 114	Hebrew I
CRLG 115	Swahili I

CRLG 151 - 170 Critical Languages II 3c-0l-3sh
Prerequisite: Level I or acceptable equivalent
A continuation of the first-semester course. Depending on the language being studied, reading and writing may be introduced at this level.

CRLG 151	Arabic II
CRLG 152	Chinese II
CRLG 153	Dutch II
CRLG 154	Finnish II
CRLG 155	Hindi II
CRLG 156	Hungarian II
CRLG 158	Japanese II
CRLG 159	Korean II
CRLG 160	Modern Greek II
CRLG 161	Portuguese II
CRLG 162	Russian II
CRLG 163	Swedish II
CRLG 164	Hebrew II
CRLG 165	Swahili II

CRLG 201 - 220 Critical Languages III 3c-0l-3sh
Prerequisite: Level II or acceptable equivalent
At this first intermediate level, students will begin to develop a degree of oral proficiency that will vary with the language studied. Reading and writing will be studied in all languages by this level.

CRLG 201	Arabic III
CRLG 202	Chinese III
CRLG 203	Dutch III
CRLG 204	Finnish III
CRLG 205	Hindi III
CRLG 206	Hungarian III
CRLG 208	Japanese III
CRLG 209	Korean III
CRLG 210	Modern Greek III
CRLG 211	Portuguese III
CRLG 212	Russian III
CRLG 213	Swedish III
CRLG 214	Hebrew III
CRLG 215	Swahili III

CRLG 251 - 270 Critical Languages IV 3c-0l-3sh
Prerequisite: Level III or acceptable equivalent
By the end of this course the student should be able to communicate in simple terms with an educated native speaker on a topic with which the student is familiar. Ability in reading and writing will vary with language.

CRLG 251	Arabic IV
CRLG 252	Chinese IV
CRLG 253	Dutch IV
CRLG 254	Finnish IV
CRLG 255	Hindi IV
CRLG 256	Hungarian IV
CRLG 258	Japanese IV
CRLG 259	Korean IV
CRLG 260	Modern Greek IV

CRLG 261 Portuguese IV
CRLG 262 Russian IV
CRLG 263 Swedish IV
CRLG 264 Hebrew IV
CRLG 265 Swahili IV

DANC Dance

Department of Theater and Dance
College of Fine Arts

DANC 102 Introduction to Dance 3c-0l-3sh
Examines dance as a performing art in both the historical and cultural contexts. Also includes the analysis of a major piece of choreography, attending live performances, and viewing select works of dance. No previous dance experience is required. (Offered as THTR 102 prior to 2001-02)

DANC 150 Fundamentals of Dance 3c-0l-3sh
A basic dance technique that sequentially develops the elements of movement (space, time, force) into a variety of dance genres and period styles. Covers special care and safety of the instrument—the body. (Offered as THTR 150 prior to 2001-02)

DANC 250 Contemporary Dance 3c-0l-3sh
Contemporary dance techniques, improvisation, and choreography. Examines the historical development and cultural influences on the changing philosophies of contemporary dance performance today. Performance of creative work required. (Offered as THTR 250 prior to 2001-02)

DANC 260 Jazz Dance 3c-0l-3sh
Jazz techniques, dynamics, and style for theater dance from the 1920s through the present. The emphasis will be on analysis of music for choreography. (Offered as THTR 260 prior to 2001-02)

DANC 270 Ballroom and Tap Dance 3c-0l-3sh
A sequential development of tap and ballroom dance techniques in the context of historical development and period styles. Performance for an audience is required. (Offered as THTR 270 prior to 2001-02)

DANC 280 Ballet 3c-0l-3sh
Sequential development of barre and center techniques that progress to linking moves, turning, and jumps, to dance sequences and choreography. The historical periods of development and the status of the art today will be examined in a cultural context which includes gender and minority influences. (Offered as THTR 280 prior to 2001-02)

DANC 290 Ethnic Dance 3c-0l-3sh
Includes dance techniques from a variety of indigenous forms from Western and Eastern cultures. Presented in the historical and social context. An emphasis will be given to the needs of theater production. (Offered as THTR 290 prior to 2001-02)

DANC 351 Choreography 3c-0l-3sh
Prerequisite: One of the following introductory or advanced-level dance classes: DANC 150, 250, 260, 270, 280, 485; or permission of instructor
Introduces the necessary choreographic tools needed to manipulate dance as a medium to create dance works. The class will learn and use various approaches to the choreographic process to create dance works, one of which will be presented in a public showing at the end of the semester. (Offered as THTR 351 prior to 2001-02)

DANC 353 Dance Curriculum and Instruction 3c-0l-3sh
Prerequisite: One of the following theater courses: DANC 250, 260, 270, 280, 290, or 485; or permission of instructor
Introduces the necessary teaching skills and curriculum development needed to understand the pedagogical structure for teaching dance. The class will learn the approaches to teaching that are unique to dance and will learn how to design dance curriculum. (Offered as THTR 353 prior to 2001-02)

DANC 485 Dance Studio 3c-0l-3sh
Prerequisite: DANC 250, 260, 270, or 280 (beginning technique class taken must be the specific dance genre of the Dance Studio class offered); or by permission of instructor
Furthers the development of the dancer at the intermediate level of a specified genre of dance. Development in dance requires the integration of both technique and artistic development. The specific genres vary from semester to semester, including modern, ballet, tap, and jazz as alternating semester options. May be repeated with a different focus each time. (Offered as THTR 485 prior to 2001-02)

DEDU Distributive Education

Department of Technology Support and Training
Eberly College of Business and Information Technology

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course. Business majors (except those majoring in Business Education) who have not achieved Junior Standing are normally not permitted to enroll in 300- or 400-level courses.

DEDU 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

DEDU 331 Modern Merchandising 3c-0l-3sh
Techniques for planning and controlling inventory, analyzing sales, working with modern systems for handling cash, and using color, line, and design. Practice in preparing merchandise display units.

DEDU 413 Methods and Evaluation in Distributive Education II 3c-0l-3sh
Prerequisites: BTED 111, DEDU 333, EDSP 102, and MKTG 320
Includes two sections of special methods and evaluation in this field. Objectives are to acquaint students with the basic principles of group and individual instruction in various subject matter areas, as well as methods of presentation. Unit plans, lesson plans, demonstrations, and evaluations will be prepared. Students select sections needed for certification.

DEDU 481 Special Topics 3c-0l-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

DEDU 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ECED Early Childhood Education

Professional Studies in Education
College of Education and Educational Technology

Note: Courses in Early Childhood Education are restricted to majors with a 2.5 cumulative GPA, except with departmental permission.

ECED 200 Introduction to Early Childhood Education 3c-0l-3sh
An introductory course for prospective teachers of young children. Provides students with the opportunity to gain knowledge of historical, sociological, and political aspects of early childhood education. The emphasis will be on systematically observing, recording, and evaluating children's behavior in classrooms.

ECED 220 Language Development and Children's Literature 3c-0l-3sh
Includes the study of children's language acquisition and children's literature within the context of a developmentally appropriate language arts curriculum, preschool through the primary grades. Strategies for developing children's linguistic competence and integrating literature throughout the early childhood program will be emphasized. Observations, interviews, and teaching experiences are an integral part of the course. (Offered as a writing-intensive course.)

ECED 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

ECED 310 Integrated Curriculum I 3c-0l-3sh
Examines the sequence of cognitive development in children and the implications for instructional programs. Stages of cognitive understanding will be applied to the basic components of numerical concepts and science concepts. Classroom management strategies that can be utilized in varied environments will be stressed.

ECED 311 Integrated Curriculum II 3c-0l-3sh
Enables students to realize the importance and relevance of content area subjects as related to the early childhood years. Planning for teaching with specific emphasis on methods and materials for social and environmental living is introduced. The integration of music and art is emphasized. Values systems and self-esteem are integral to social living.

ECED 312 Aesthetic Experiences for Young Children 3c-0l-3sh
An interdisciplinary approach to different forms of creative expression in young children. Art, music, and movement will be analyzed as aesthetic elements in a comprehensive early childhood curriculum. Development of creative potential in both teachers and children will be promoted as a means of enhancing the artist's experiences. Students will expand their use of the arts to enhance the self-esteem and self-worth of the children.

ECED 315 Development and Learning Through Play 3c-0l-3sh
Provides early childhood educators with the knowledge and skills necessary to promote and guide children's play behavior as the child's basic learning mechanism. The emphasis will be on definitions, theories, and stages of play within the context of social, emotional, physical, and intellectual growth for children aged 0-8 years. Students will observe children at play, design specific learning activities that utilize a play/games format, and direct educational experiences during a supervised field component.

ECED 451 Teaching Primary Reading 3c-0l-3sh
A methods course designed to assist students in developing the reading abilities of young children. Deals with instructional issues related to teaching reading and introduces students to varying reading and pre-reading processes which are effective with young children. Also emphasizes diagnostic and assessment strategies for teaching reading.

ECED 481 Special Topics var-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
A course/seminar on topics in education appropriate for the Early Childhood Education setting.

ECED 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ECON Economics

Department of Economics
College of Humanities and Social Sciences

ECON 101 Basic Economics 3c-0l-3sh
Scarcity, role of prices in determining production and the allocation of resources, business cycle analysis, policy options for reducing unemployment and inflation, economic role of government, international trade, and selected current economic problems are studied. For those who do not plan to take more than 3sh of economics. Note: May not be taken after successful completion of or concurrent registration in any other Economics course.

ECON 121 Principles of Economics I 3c-0l-3sh
Nature and methodology of economics; mixed capitalism and market economy: national income; employment theory, including economics of fiscal policy; money, banking, and Federal Reserve System; international trade and finance.

ECON 122 Principles of Economics II 3c-0l-3sh
Economics of the firm; theory of consumer demand; determination of price and output in different market structures; distribution of income; economic growth.

ECON 223 Economics of Crime 3c-0l-3sh
Economic analysis of criminal activity and its impact on the allocation of scarce resources. Will use fundamental economic models to explain crimes against people, property crime, "victimless crime," and organized crime.

ECON 239 Economics of Sports 3c-0l-3sh
The purpose is to gain a better understanding of the sports industry. Explores how economics applies to both amateur and professional sports. Students will learn about a variety of areas, including the labor issues in sports (e.g., free agency, reserve clause, unions, strikes, and discrimination), the legal relationship between sports and the government (e.g., Title IX and antitrust law), and public finance issues (e.g., location of sports franchises and public ownership of stadiums and arenas). Guest speakers and a multimedia approach will be used.

ECON 241 Contemporary Economic Issues 3c-0l-3sh
Prerequisite: ECON 101 or 122
A rigorous but nontechnical analysis of a variety of economic problems and a formulation and evaluation of possible corrective policies.

ECON 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

ECON 283 Environmental Economics 3c-0l-3sh
Prerequisite: ECON 101 or 122
An examination of economic costs and benefits of environmental control and modification. Techniques of economic analysis are used to understand economic aspects of environmental problems and contribute toward their solution.

ECON 325 Monetary Economics I 3c-0l-3sh
Prerequisites: ECON 121, 122
Organization, operation, and economic significance of U.S. monetary institutions: commercial banks and Federal Reserve System; survey of monetary theory and policy; mechanism of international payments.

ECON 326 Monetary Economics II 3c-0l-3sh
Prerequisite: ECON 325 or permission of the instructor
Detailed study of monetary theory; tasks of central banking; principal objectives of monetary policy; intensive study of recent monetary experience; complementary and competing aims of monetary and fiscal policy.

ECON 330 Labor Economics 3c-0l-3sh
Prerequisites: ECON 121, 122
History, structure, and operation of trade unions and employer organizations; major federal labor legislation; collective bargaining theory; wage determination; current labor problems.

ECON 331 Economic Organization of Industry 3c-0l-3sh
Prerequisite: ECON 122 or permission of the instructor
Social effectiveness of industries analyzed through measures of market structure, market conduct, and market performance.

ECON 332 Government and Business 3c-0l-3sh
Prerequisite: ECON 122 or permission of the instructor
An analysis of the antitrust laws focusing on the maintenance of competition, the prohibition of unfair business conduct, and the achievement of desirable economic performance.

ECON 333 Regulation of Industry 3c-0l-3sh
Prerequisites: ECON 121, 122 or permission of the instructor
Examines the theory and practice of regulation, emphasizing effects of regulation on economic performance and efficiency in the U.S.

ECON 334 Economics of Corporate Decisions 3c-0l-3sh
Prerequisites: ECON 121, ECON 122, MATH 121 or equivalent
Applications of economic theory using algebra, elementary statistics, and calculus to solve managerial optimization problems including problems of forecasting and risk.

ECON 335 Public Finance 3c-0l-3sh
Prerequisites: ECON 121, 122 or permission of the instructor
Taxation and expenditure theory at the federal level; federal budget and debt considerations; public sector impact upon economy.

ECON 336 State and Local Finance 3c-0l-3sh
Prerequisite: ECON 122 or permission of the instructor
An analysis of character and impact of state and local government revenue sources, expenditures, and fiscal systems; intergovernmental fiscal relations.

ECON 339 Economic Development I 3c-0l-3sh
Prerequisites: ECON 121, 122
Theory of growth; theory of economic development of underdeveloped countries.

ECON 343 History of the Economic Development of the United States 3c-0l-3sh
Prerequisite: ECON 101 or 121 or 122
Applications of economic theory and models of economic development to the main patterns of U.S. postrevolutionary growth; emphasizes the history of economic development as a laboratory for testing economic hypotheses.

ECON 345 International Trade 3c-0l-3sh
Prerequisites: ECON 121 and 122 or permission of the instructor
A study of the microeconomic segment of international specialization and exchange, including theories of international trade and their application to commercial policies, historical survey and examination of current problems of international trade, and the institutional setting of international trade.

ECON 346 International Payments 3c-0l-3sh
Prerequisites: ECON 121 and 122 or permission of the instructor
A study of the macroeconomic segment of international specialization and exchange, including analysis of balance of payments, exchange rates, and the mechanism of international economic and monetary adjustments; international macroeconomic policy; historical survey and examination of current international financial problems; and the institutional setting of international payments.

ECON 350 Comparative Economic Systems 3c-0l-3sh
Prerequisite: ECON 101 or 121 or 122
An evaluation of premises, practices, institutions, and performance of capitalist, socialist, and mixed economies using economic theory and measurement.

ECON 351 Russian Economic Development 3c-0l-3sh
Prerequisite: ECON 101 or 121 or 122
A study of the theory, institutions, and performance of the Russian economy including comparison of present and past patterns of economic development.

ECON 355 Statistics for Economists 3c-0l-3sh
An introduction to economic statistics, including frequency distributions, probability, distributions of random variables, functions of random variables, and tests of economic hypotheses.

ECON 356 Introduction to Econometrics 3c-0l-3sh
Prerequisites: ECON 355 or its equivalent or permission of the instructor
An introduction to econometrics, including linear normal regression models of two or more random variables, special econometric problems, and solutions of simultaneous equations.

ECON 360 Economics of Health Services 3c-0l-3sh
An analysis of the allocation of resources in the health sector using demand and supply techniques. Pricing and output decisions by physicians, hospitals, and other health agencies will be considered along with other current policy issues.

ECON 371 Economics of Labor Legislation 3c-0l-3sh
Prerequisite: ECON 330 or permission of the instructor
Economic background and effects of governmental regulation of labor relations, with an emphasis on a detailed examination of National Labor Relations Act as amended.

ECON 372 Economics of Wages and Employment 3c-0l-3sh
Prerequisite: ECON 330 or permission of the instructor
An analysis of wages and employment under various market structures. Also, analysis of the impact of labor market forces on wages, prices, and distributive shares.

ECON 373 Economics of Human Resources 3c-0l-3sh
Prerequisite: ECON 101 or 122
An inquiry into economic demographics and related factors affecting growth, structure, and distribution of an economy's labor force into different occupations.

ECON 383 Urban/Regional Economics 3c-0l-3sh
Prerequisites: ECON 121 and 122
Location theory, land use patterns, urban economic/regional growth change, and urban economic problems and policies.

ECON 421 Macroeconomic Analysis 3c-0l-3sh
Prerequisites: ECON 121, 122 or permission of the instructor
Emphasizes aggregate income levels and problems of unemployment, inflation, and growth. Covers consumption and investment theories and the role of fiscal and monetary policy.

ECON 422 Microeconomic Analysis 3c-0l-3sh
Prerequisites: ECON 121, ECON 122, MATH 121 or equivalent
Consumer behavior, theory of the firm, theory of exchange, market structures, distribution, general equilibrium theory, welfare economics.

ECON 480 Seminar 3c-0l-3sh
Prerequisite: Permission of the instructor
A seminar in selected economic issues or problems.

ECON 481 Special Topics var-1-3sh
Prerequisite: Permission of the instructor
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

ECON 482 Independent Study var-1-6sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ECON 493 Internship in Economics var-2-12sh
Prerequisites: Must be an economics major who has completed at least 12 sh in ECON and who has at least a 2.5 GPA in the major and in all coursework
Provides on-the-job experience in economics positions with private and governmental employers. The student is also required to complete related academic work in the form of papers and selected readings. Number of semester hours earned will depend upon the nature of the job and amount of time involved in internship. A maximum of 6sh earned in this course may be counted toward the 30sh in economics requirement for Economics majors.

EDEX Education of Exceptional Persons

Department of Special Education and Clinical Services
College of Education and Educational Technology

EDEX 111 Introduction to Exceptional Persons 3c-0l-3sh
Prerequisite: For department majors and official incoming transfers only
Surveys characteristics, needs, problems, and behavior patterns of any person who deviates sufficiently from "normal" to be considered exceptional. Consideration to those who fall intellectually both above and below average and to those who are handicapped visually, acoustically, behaviorally, orthopedically, neurologically, or in respect to speech patterns.

EDEX 112 Typical and Atypical Growth and Development 3c-0l-3sh
Prerequisites: EDEX 111, PSYC 101
Presents foundations of human growth from conception, including basic embryogenesis, up to but not including adolescence. Considers the biological, cultural, educational, and parenting influences that shape the child, as well as selective examples of normal and deviant physical and intellectual development.

EDEX 221 Methods of Teaching Mathematics to Persons with Disabilities 3c-0l-3sh
Prerequisites: MATH 151, EDEX 111
Emphasizes recent developments in elementary curriculum and instructional techniques for developing concepts; implications of recent resource developments and materials helpful to the prospective special education teacher. An emphasis is also placed on methods of helping children learn mathematical concepts through physical activity and on ways to adapt regular classroom materials to meet needs and abilities of slow and disabled learners.

EDEX 222 Methods of Teaching Reading to Persons with Disabilities 3c-0l-3sh
Prerequisite: Sophomore status or above
Presents basic concepts of developmental reading instruction and systematic coverage of the methods of teaching reading from readiness stages through eighth grade. Diagnostic-prescriptive techniques are included.

EDEX 231 Methods of Teaching Content Area Subjects to Persons with Disabilities 3c-0l-3sh
Prerequisites: EDEX 111, 2.5 GPA
Presents methods for teaching science and social studies to the mentally and or physically handicapped. Scope and sequence of content, as well as evaluative techniques for each content area, are studied. Integration of other content areas and skill areas is stressed. Also stresses teaching in both resource room and less restrictive environments. (Offered as EX 322 prior to Spring, 1998)

EDEX 300 Education of Students with Disabilities in Inclusive Elementary Classrooms 2c-0l-2sh
Prerequisites: For Early Childhood and Elementary Education majors only; to be taken only during the semester of the designated methods courses
Examines the issues associated with education of students with diverse learning needs, particularly those with disabilities or who are at risk for school failure. There is an emphasis on special education, particularly the legal rights of students with exceptionalities and their parents, and the responsibilities of educators in addressing those rights. Examines the differential impact of student characteristics on elementary-level school performance and instructinnal methods proven to be effective in educating students with disabilities and learning style differences.

EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings 2c-0l-2sh
Prerequisite: For Secnndary Education majors and others who will be certified to teach content from K-12
Recommendation: It is strongly recommended that students take this course in the same semester as the designated methods course.
Examines the issues associated with education of students with diverse learning needs, particularly those with disabilities or who are at risk for school failure. There is an emphasis on special education, particularly the legal rights of students with exceptionalities and their parents, and the responsibilities of educators in addressing those rights. Examines the differential impact of student characteristics on secondary-level school performance and instructional methods proven to be effective in educating students with disabilities and learning style differences.

EDEX 321 Methods of Teaching Language Arts to Persons with Disabilities 3c-0l-3sh
Prerequisites: EDEX 111, EDEX 222, and SPLP 254, 2.5 GPA
A review of typical and atypical characteristics of the handicapped in relationship to the language arts. Deals with preparation and execution of units of instruction in language arts for mentally and/or physically handicapped persons. Diagnostic and prescriptive approaches are included; integration of language arts with a highlight on reading is stressed.

EDEX 340 Intrnduction to Behavior Management in Special Education 3c-0l-3sh
Prerequisites: EDEX 111, EDEX 112, EDSP 102, 2.5 GPA
An overview of systematic behavioral change techniques for use with students in a variety of special education settings including integrated, resource, self-contained, special school, and residential. Emphasizes a case analysis approach to creating and evaluating behavioral changes for students with mild to severe disabilities.

EDEX 415 Preschool Education for Children with Disabilities 3c-0l-3sh
Prerequisites: Departmental permission, 2.5 GPA
Provides information on assessment, intervention strategies, curriculum, and prescriptive planning fnr preschool children with disabilities. Serves as a course for departmental majors who are specifically interested in early childhood education, as an elective for other interested students in related fields, and as a priority course for Early Childhood Education majors.

EDEX 416 Education of Persons with Emotional or Behavioral Disorders 3c-0l-3sh
Prerequisites: Junior status or above, 2.5 GPA
Focuses on major theoretical positions regarding etiology of emotional and behavioral disorders, definition and identification of the population, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services.

EDEX 417 Education of Persons with Mental Retardation or Developmental Disabilities 3c-0l-3sh
Prerequisites: Junior status or above, 2.5 GPA
Focuses on major theoretical positions regarding etiology of mental retardation and developmental disabilities, including autism. Definition, identification, and educational apprnaches are discussed. Reviews research in the field, including current issues, trends, practices, and services.

EDEX 418 Education of Persons with Physical or Multiple Disabdities 3c-0l-3sh
Prerequisites: Junior status or above, 2.5 GPA
Focuses on major theoretical positions regarding etiology of a wide and diverse range of physical/multiple disabilities, the definition and identification of the population, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services.

EDEX 419 Education of Persons with Brain Injuries or Learning Disabilities 3c-0l-3sh
Prerequisites: Junior status or above, 2.5 GPA
Focuses on major theoretical positions regarding etiology of neurological and learning disabilities, definition and identification of the population, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services.

EDEX 425 Methods and Curriculum (Mild-Moderate Disabilities) 3c-0l-3sh
Prerequisites: EDEX 221, 222, 231, 321, 340, 2.5 GPA
Provides in-depth examination of assessment methods, strategies, and curricula. Emphasizes assessment methods and strategies used in a variety of service models that serve elementary- and secondary-level students with learning disabilities, behavioral disorders, mild mental retardation, and high-function autism.

EDEX 435 Methods and Curriculum (Severe-Profound Disabilities) 3c-0l-3sh
Prerequisites: EDEX 221, 222, 231, 321, 340, 2.5 GPA
Emphasizes methods designed to facilitate the development of an integrated, functional, and community-based curriculum that will prepare students for participation in a wide variety of postschool environments.

EDEX 440 Ethical and Professional Behavior 1c-0l-1sh
Prerequisites: Departmental permission, 2.5 GPA
Emphasizes ethical and professional behavior for student teachers and professional employees. Possibilities for and methods of initiating and profiting from postbaccalaureate study are indicated. Student teachers are required to complete and present a curriculum book regarding each student-teaching experience.

EDEX 480 Seminar in Special Education var-1-3sh
Prerequisite: Departmental permission
Interested students may use this course for the pursuit of knowledge regarding specific concerns of the exceptional which are not ordinarily considered in such detail during regular classroom instruction. Students wishing to enroll are expected to submit a written proposal regarding their desire for study at the time permission for enrollment is sought. With permission, the course may be repeated for credit.

EDEX 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

EDHL Education of Persons with Hearing Loss

Department of Special Education and Clinical Services
College of Education and Educational Technology

EDHL 114 Introduction to Persons with Hearing Loss 3c-0l-3sh
Prerequisites: Advisor permission, EDHL majors only
Deals with the different approaches used in teaching the hearing impaired—manual language, oral language, and total communication. The historical background of each approach is presented with its strengths and weaknesses. Criteria for the use of each approach established in consideration of degree of loss exhibited by the pupil, the age of onset, and the social and psychological implications.

EDHL 115 Introduction to Sign Language 1c-0l-1sh
Development of manual dexterity and fluency using fingerspelling. Acquisition of basic sign language vocabulary. Practice in acquiring general information from a signed message and conversing informally on commonly used topics.

EDHL 244 Intermediate Sign Language 1c-0l-1sh
Prerequisite: EDHL 115
The emphasis will be on comprehension of signed information and on developing fluency in conveying a message in both signed English and American Sign Language. Modification of signs and individualization of techniques for instruction/communication with learning-impaired or multihandicapped deaf learners.

EDHL 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

EDHL 307 Speech for Persons with Hearing Loss 3c-0l-3sh
Prerequisites: EDHL 114, SPLP 242, 2.5 GPA
Techniques for developing, diagnosing, analyzing, and correcting the speech and

voice problems of hearing-impaired individuals. Lecture, demonstration, and special projects.

EDHL 308 Language for Persons with Hearing Loss 3c-0l-3sh
Prerequisites: EDHL 114, SPLP 334, 2.5 GPA
Development and remediation of language of the hearing impaired. Language sampling and diagnostics, sentence patterning, and analytic vs. natural teaching methods. Structuring a communicative environment.

EDHL 329 Hearing Practicum I var-1sh
Prerequisites: EDHL 114, 115, 2.5 GPA
Provides the student with actual contact with individuals with hearing loss. Practica will be set up in appropriate school programs and/or clinics for the hearing impaired, in hearing itinerant programs, or in clinical settings where hearing-impaired individuals are receiving therapy or are being tested. Techniques of observing and evaluating behavior are presented initially to prepare the student to profit maximally from the observation experiences. Written reports of the practica are submitted and discussed, and each student is encouraged to gain experience in as many different settings as available.

EDHL 330 Hearing Practicum II var-1sh
Prerequisites: EDHL 329, 2.5 GPA
Provides students with actual contact with individuals with hearing loss. Practica will be set up in appropriate school programs and/or clinics for the hearing impaired, in hearing itinerant programs, or in clinical settings where hearing-impaired individuals are receiving therapy or are being tested. Techniques of observing and evaluating behavior are presented initially to prepare the student to profit maximally from the observation experiences. Written reports of the practica are submitted and discussed, and each student is encouraged to gain experience in as many different settings as available. This is a continuation of EDHL 329: Hearing Practicum I and includes support and supervision of students in EDHL 329.

EDHL 331 Advanced Sign Language 1c-0l-1sh
Prerequisites: EDHL 115, 244, 2.5 GPA
Studies the evolution of signs; dialectical sign systems. Analysis and comparison of the linguistic similarities/differences of various sign languages. Direct translation of written or spoken information on specific topics using American Sign Language or Signed English. Practice using conversation on both a social and academic level.

EDHL 351 Teaching Reading to Persons with Hearing Loss 3c-0l-3sh
Prerequisites: EDHL 308, 2.5 GPA
Presents basic concepts of developmental reading instruction and systematic coverage of the methods of teaching reading to students with hearing loss from readiness stages through upper school.

EDHL 360 General Methodology for Education of Persons with Hearing Loss 3c-0l-3sh
Prerequisites: EDHL 114, 307, 308, 2.5 GPA
Provides a systematic coverage of the basic procedures for teaching curriculum subjects. Included are adaptive methods of instruction for teaching mathematics; science as it relates to the child and the curriculum; content, objectives, and resource materials for social studies; creative experiences in the field of language arts, rhythmics, and physical education and health.

EDHL 365 Parent-Preschool Programs for Persons with Hearing Loss 3c-0l-3sh
Prerequisites: EDEX 112, EDHL 307, EDHL 308, EDHL 114, SPLP 334, 2.5 GPA
Developing home/clinic programs for parents and hearing-impaired infants (0-3 years). Teaching speech, language, speechreading, use of residual hearing, and developing readiness skills at preschool level.

EDHL 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

EDHL 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

EDSP Educational and School Psychology

Department of Educational and School Psychology
College of Education and Educational Technology

EDSP 102 Educational Psychology 3c-0l-3sh
Designed to promote an understanding of the principles of psychology governing human behavior, with particular emphasis on their relation to learner, learning process, and learning situation in an educational environment. (Offered as EDSP 202 prior to 2001-02)

EDSP 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

EDSP 373 Psychology of Adolescent Education 3c-0l-3sh
Prerequisite: EDSP 102
A study of significant characteristics, behavior, and educational and social problems of adolescents.

EDSP 376 Behavior Problems 3c-0l-3sh
Prerequisite: EDSP 102
An examination of emotional and social aspects of behavior problems encountered in classroom situations and potential remedial techniques.

EDSP 378 Learning 3c-0l-3sh
Prerequisite: EDSP 102
Explores learning theories and educational application in the classroom.

EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3c-0l-3sh
Prerequisites: PSYC 101 or permission
Designed to acquaint students with major methods and techniques of evaluation used to assess and report growth, development, and academic achievement of learners in elementary and secondary schools, including interpretation of standardized test information. (Offered as EDSP 377 Educational Tests and Measurements prior to 2001-02)

EDSP 481 Special Topics in Educational Psychology var-1-3sh
Prerequisite: Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

EDSP 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

EDSP 499 Independent Study var-1-3sh

EDUC Education

College of Education and Educational Technology

EDUC 242 Pre-Student Teaching Clinical Experience I var-1sh
Prerequisite: Admission to teacher certification
Observation/participation in a basic education classroom beginning not later than the sophomore year. Transfer students (and other selected students at the recommendation of the teacher education coordinator of the program) may register later than sophomore year upon admission to teacher certification.

EDUC 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

EDUC 342 Pre-student Teaching Clinical Experience II var-1sh
Prerequisites: EDUC 242 and admission to junior standing
Students work toward the development of specific competencies that relate to individual major fields of teaching.

EDUC 389 Field Experience Intervention 3c-0l-3sh
Prerequisites: Permission of department and instructor; Elementary Education or Early Childhood Education major
Designed to assist the student in achieving the competencies within the major necessary for performance in student teaching. Teaching skills will be developed through one-on-one tutoring and a field experience. Each student will work in collaboration with the instructor to develop a personal learning contract that provides a means for demonstrating those competencies identified by the instructor and student. Students are expected to show commitment to self-development and teaching. Course is only offered on a pass/fail basis.

EDUC 408 Reading in the Content Areas 3c-0l-3sh
Prerequisite: ELED 222
Problems related to teaching students reading and study skills specifically needed in each of the subject areas at the elementary level. Content teachers learn how to develop students' competence in these skills as part of their regular classroom instruction.

EDUC 415 Computers in the School Curriculum 3c-0l-3sh
Prerequisite: BTED/COSC/IFMG 101 or permission of the instructor
Students will use a variety of computer software including word processing, record management programs, and simulation programs. The emphasis will be on the application of computer programs within the K-12 school curriculum.

EDUC 421 Student Teaching var-6sh
Prerequisite: Admission to Student Teaching
An experience in teaching at the elementary level; coordination and visitation by a university faculty member with daily supervision by a cooperating classroom teacher.

EDUC 423 Professional Practicum, Including School Law var-3sh
A series of conferences and related activities to prepare students for actual teaching experiences. Parallels student teaching experience in junior and senior years. (Elementary Education majors only)

EDUC 431 Student Teaching in Family and Consumer Sciences var-6sh
Prerequisite: Admission to Student Teaching
An experience in teaching family and consumer sciences at the secondary level.

EDUC 441 Student Teaching var-6-12sh
Prerequisite: Admission to Student Teaching
An experience in teaching at the elementary or secondary level; coordination and visitation by a university faculty member with daily supervision by a cooperating classroom teacher.

EDUC 442 School Law 1c-0l-1sh
Required of all teacher certification students. Includes overview of legal principles that apply to special areas of education. Must be taken prior to student teaching.

EDUC 451 Teaching Science in the Secondary School 2c-2l-3sh
Prerequisite: Admission to Student Teaching
Background to help science majors meet the problems of teaching science. Various inquiry approaches useful in meeting objectives of a contemporary science class are taught and exemplified.

EDUC 452 Teaching of English and Communication in the Secondary School 3c-0l-3sh
Prerequisites: ENGL 314, 323, and 380 and admission to Student Teaching
A prerequisite to student teaching in English. Introduces the student to current professional practices in the teaching of English and communications in high school.

EDUC 453 Teaching of Foreign Languages in the Elementary/Secondary Schools 3c-0l-3sh
Prerequisites: Successful completion of 321-322 and 351-352 in the student's major language; passage of a language proficiency examination or permission of the instructor; and admission to Student Teaching
The student will study current theories of language acquisition and methods of language teaching for the elementary and secondary school. Through hands-on practice and peer teaching demonstrations, the student will develop techniques for teaching functional language, planning lessons, setting curricular objectives, testing language skills, and selecting/adapting materials for both elementary and secondary school classrooms. Taught Fall semester only.

EDUC 455 Teaching of Social Science in Secondary Schools 3c-0l-3sh
Prerequisite: Admission to Student Teaching
A study of modern methods and techniques for teaching social science and of current curricula in social science.

EDUC 456 Teaching Math in the Secondary Schools 3c-0l-3sh
Prerequisite: Admission to Student Teaching
A study of modern methods and techniques for teaching mathematics and current curricula.

EDUC 462 Issues and Innovations in Education 3c-0l-3sh
A study of issues and innovations which influenced education will be included. Educational innovations and issues which deal with curriculum, school organization, and materials of instruction will be examined.

EDUC 481 Special Topics 3c-0l-3sh
Prerequisite: By permission only
Provides an opportunity for students to investigate in-depth an area of education under professional supervision.

EDUC 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

EDUC 495 International Study Tour in Education var-3sh
A study of various peoples through their cultural settings and educational systems; on-site visitation to selected schools and other social agencies and institutions; seminars with school officials and directed readings.

EDUC 499 Multicultural/Multiethnic Education 2c-0l-2sh
Prerequisite: One methods course must be taken prior to, or concurrently with, EDUC 499
Provides students with an understanding and appreciation of cultural diversity in the United States. Students will gain the ability to locate and develop curricular materials appropriate to this country's diversity.

ELED Elementary Education

Professional Studies in Education
College of Education and Educational Technology

Note: Courses in Elementary Education are restricted to majors with a 2.6 cumulative GPA, except with departmental permission.

ELED 110 Pathways to Teaching 1c-0l-1sh
Prerequisites: Freshmen with a declared major of Elementary Education or Early Childhood Education or permission of instructor
An orientation to the profession of teaching for incoming freshman majors. Designed to enhance awareness of the skills, attitudes, and behaviors majors will need for success as university students and as elementary and early childhood educators. In light of the increasing complexity of the teaching profession it will familiarize the students with the program options and career-enhancing specializations available to them through the Professional Studies in Education Department. Introduces students to the Conceptual Framework of the College of Education and provides knowledge about the foundational elements of Content, Collaboration, the Learner, Commitment, and Competence, which are regarded as crucial aspects of a professional identity for teaching.

ELED 211 Music for the Elementary Grades 2c-0l-2sh
Geared for elementary education students. Includes basic ideas for understanding, development, and confidence for future classroom teachers and their pupils in areas of music education.

ELED 213 Art for the Elementary Grades 2c-0l-2sh
The creative use of art materials and an understanding of development of capacities of children through art.

ELED 215 Child Development 3c-0l-3sh
A survey of human development, from conception to adolescence, in terms of basic scientific data. Development, growth, and behavior are studied and their implications for home, school, and community are considered.

ELED 221 Children's Literature 3c-0l-3sh
Acquisition of a wide acquaintance with children's literature, old and new. Poetry selections, annotated stories, and bibliographies will be assembled. Ways and

means to develop, stimulate, and guide children's reading of literature presented. Principles and techniques of successful storytelling are studied and practiced.

ELED 222 Reading for the Elementary School 3c-0l-3sh
A systematic coverage of the teaching of reading, including methods, techniques, and materials.

ELED 257 Pedagogy I 3c-0l-3sh
Competencies specific to the science of teaching will be introduced. Students will become familiar with the fundamentals of teaching at the elementary level. Areas that will be explored include models of teaching, including lesson and unit planning, and creating a classroom environment that is conducive to learning. (Offered as EL 356 prior to 1997-98)

ELED 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

ELED 312 Teaching of Elementary Science 2c-0l-2sh
An emphasis placed upon science as it relates to child and curriculum, planning for teaching science, and recent innovations in science teaching. Course offered on the junior block only.

ELED 313 Teaching Mathematics in the Elementary School 3c-0l-3sh
Prerequisites: MATH 151, 152, ELED 257
Recent developments in curriculum and methods of instruction of contemporary elementary school mathematics programs. Students will become acquainted with books, materials, and other resources helpful to prospective teachers. Includes observations of master teachers.

ELED 314 Teaching of Health and Physical Education 2c-0l-2sh
Games, stunts, rhythms, relays, tumbling, dances, and skills suitable for the elementary school child. Teaching of health in elementary school is emphasized, including methods, materials, and lesson planning.

ELED 322 Teaching of Reading II 3c-0l-3sh
The second course of a two-course sequence. Systematic coverage of teaching of reading, including methods, materials, and lesson planning.

ELED 351 Creative Activities in the Elementary School 3c-0l-3sh
Provides students with a wide range of creative experiences in fields of art, crafts, music, rhythmics, dramatics, and games in elementary school. Stress is placed upon need to help children in developing their capacities for creative expression in these areas.

ELED 357 Pedagogy II 3c-0l-3sh
Prerequisite: Junior status
Principles based on classroom experience. Instruction will include classroom management skills, integration of computers in the elementary curriculum, contemporary issues in education, the role of research in elementary classroom teaching, and teacher professionalism during and after field experiences. (Course is writing intensive.)

ELED 411 Teaching of Social Studies 3c-0l-3sh
An overview of social studies in elementary school. Includes study of objectives, trends, areas of content, patterns and principles of organization, and techniques of teaching. Variety of learning experiences and materials used and evaluated.

ELED 422 Diagnostic and Remedial Reading 3c-0l-3sh
Prerequisite: ELED 222
Causes of reading disability; methods of diagnosis; procedures and materials for remedial work, group and individual.

ELED 425 Language Arts Across the Curriculum 3c-0l-3sh
Prerequisite: ELED 222
Places an emphasis on the view that the art of communication is an interrelated process and the task of classroom teachers is not only integrating the language arts among themselves but also integrating them throughout the entire curriculum. Techniques for teaching oral and written communication, spelling, handwriting, vocabulary development, listening, and linguistics will be presented. Special emphasis given to recent trends and research. Course is offered as a writing-intensive course.

ELED 481 Special Topics var-3sh
Prerequisite: Approval of instructor and department
A course/seminar on topics in education appropriate for the Elementary Education setting.

ELED 482 Independent Study var-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ENGL English

Department of English
College of Humanities and Social Sciences

ENGL 100 Basic Writing 3c-0l-3sh
Designed to develop the basic English skills necessary for clear and effective communication. Reserved for selected students. Does not meet General Education English or Liberal Studies writing requirements.

ENGL 101 College Writing 3c-var-4sh
Prerequisite: ENGL 100, where required by placement testing
Normally to be taken the first semester at IUP. Courses use readings in the nature and history of language, semantic and linguistic analysis, and problems in rhetoric and other approaches to composition. Seven theme-length expository papers (or the equivalent) are written, in addition to shorter exercises and a written final examination.

ENGL 121 Humanities Literature 3c-0l-3sh
Prerequisite: ENGL 101
Introduces students to literature of various genres through a careful analysis of poetry, fiction, and drama. Includes literature of various time periods, nationalities, and minorities.

ENGL 122 Introduction to Literary Analysis 3c-0l-3sh
Prerequisite: ENGL 101
Acquaints students with the literary genres (especially fiction, poetry, and drama) by means of examples of each and provides them with some of the various critical approaches to the interpretation of literature so that they may gain the ability to apply them. At the conclusion of the course, students are expected to be able to read literature perceptively and to write critical papers about it. (Offered as EN 210 prior to Spring, 1998)

ENGL 150 English for Foreign Students 3c-0l-3sh
Provides international students with an opportunity to improve their ability to speak and write English before they take ENGL 100 and ENGL 101. The emphasis is on individualized exercises and assignments. Carries graduation credit but does not meet Liberal Studies English requirements.

ENGL 202 Research Writing 3c-0l-3sh
Prerequisites: ENGL 101, sophomore standing
Teaches students to read, analyze, and evaluate nonfiction sources and to present the results of their analysis in clear, organized, carefully documented research papers. The focus of reading and research in each section will be determined by the instructor.

ENGL 208 The Art of the Film 3c-0l-3sh
Concentrates on the film as an artistic medium. Eight to twelve motion pictures are shown during semester and are analyzed in class discussions.

ENGL 210 British Literature to 1660 3c-0l-3sh
Prerequisites: ENGL 101, 122, or permission
Surveys British literature from its beginnings to about 1660, acquainting students with the experience of reading many of the primary materials (whole works whenever possible or full, free-standing parts) and provides them with background information concerning the development and flowering of the various genres, the dominant ideas of each period, and the social and cultural context of the separate works. (Offered as EN 211 prior to Spring, 1998)

ENGL 211 British Literature 1660-1900 3c-0l-3sh
Prerequisites: ENGL 101, 122, or permission
Surveys British literature from about 1660 to the beginning of the twentieth century, acquainting students with the experience of reading many of the primary materials (whole works whenever possible or full, free-standing parts) and providing them with background information concerning the development and flowering of the various genres, the dominant ideas of each period, and the social and cultural context of the separate work. (Offered as EN 212 English Literature prior to Spring, 1998)

ENGL 212 American Literature: Beginnings to 1900 3c-0l-3sh
Prerequisites: ENGL 101, 122, or permission
Provides an understanding of American literature from its beginning to about 1900. The course will concentrate primarily upon a relatively small number of major works, each of which will help to illustrate the "spirit of the age" it represents. (Offered as EN 213 American Literature: Beginnings to the Present prior to Spring, 1998)

ENGL 213 British and American Literature Since 1900 3c-0l-3sh
Prerequisites: ENGL 101, 122, or permission
A survey of major authors and works in British and American literature since 1900. Begins with the shift from Victorianism and late nineteenth-century literature into modernism, as exemplified by writers such as Woolf, Hemingway, and O'Neill, and continues with postmodernism and contemporary literature.

ENGL 214 The Novel 3c-0l-3sh
Prerequisites: ENGL 101, 122, or permission
Surveys the development of the novel from Cervantes' *Don Quixote* to the present with an emphasis on major writers and forms in English. Includes consideration of teaching the novel.

ENGL 215 Poetry 3c-0l-3sh
Prerequisites: ENGL 101, 122, or permission
A study in appreciation of poetry, with special attention to the technique of the poet and structure of poetry. Includes consideration of teaching poetry.

ENGL 216 Short Fiction 3c-0l-3sh
Prerequisites: ENGL 101, 122, or permission
A study of the development of the short story from the middle of the nineteenth century to the present with attention to form, structure, and types of the story. Includes consideration of teaching short fiction.

ENGL 217 Drama 3c-0l-3sh
Prerequisites: ENGL 101, 122, or permission
The study of selected plays from various periods in an attempt to understand the function of drama. Includes consideration of teaching drama.

ENGL 220 Advanced Composition I 3c-0l-3sh
Prerequisite: ENGL 202
Primarily seeks to improve writing style, particularly in the more utilitarian forms, such as magazine article and personal essay.

ENGL 221 Creative Writing 3c-0l-3sh
Prerequisite: ENGL 202
A seminar course in which students are expected to produce a substantial body of written work in one or more of the creative genres, the particular kind of writing chosen with regard to the special interests and abilities of each student.

ENGL 225 Introduction to Literature by Women 3c-0l-3sh
Prerequisites: ENGL 121 or 122 and 202
Major trends and motifs across genres (fiction, nonfiction, poetry, autobiography) which reflect themes and subjects of continuing interest to women writers. The intersection of genre with race, ethnicity, and social class will be of particular significance. (Offered as EN 384 prior to Spring, 1998)

ENGL 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

ENGL 301 British Medieval Literature 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Examines particular literary traditions in England from the eleventh to the fifteenth centuries, excluding Chaucer. The purpose will be to acquaint students with the diversity of materials, ranging from prose to verse, oral to written, and serious to comic. Most texts will be taught in the original Middle English, accompanied by side glosses. Translations will be used where appropriate. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

ENGL 302 Renaissance Literature 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Examines major works and genres in Elizabethan literature such as pastoral and tragedy and key fiction writers, dramatists, and poets during 1558-1603. Rather than survey the period comprehensively, the purpose here is to focus closely on a specific literary period and on the writers of this period as selected by the instructor. (Offered as EN 361 The Renaissance prior to Spring, 1998)

ENGL 303 British Enlightenment Literature 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
British Enlightenment Literature refers to the imitation of the Greek and Roman authors of antiquity. Begins with the assumptions and goals of neoclassical literature and integrates the intellectual debates and contemporary politics (patriarchy, nascent capitalism, empire, slavery, class divisions) that flourished alongside of (and that shaped the emergence of) new genres (the slave narrative, the novel, gothic tales, the periodical essay). Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

ENGL 304 British Romantic Literature 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Emphasizes the relationship between literature and its milieu. Focuses primarily on English Romantic Poets but considers development in Germany, France, and America and examines its continuing manifestations in literature, culture, and politics. Rather than survey the period comprehensively, the purpose here is to focus closely on a specific literary period and on the writers of this period as selected by the instructor. (Offered as EN 360 Romanticism prior to Spring, 1998)

ENGL 305 British Victorian Literature 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Examines literary works against a background of rapidly changing social, economic, religious, and political forces. Counterculture movements, such as the Pre-Raphaelites, will be examined against "high Victorianism" to develop a sense of the tremendous intellectual and political energy of the period. Roots of recent concerns such as feminism, political literalism, and capitalism will be explored to help us better understand our own as well as the Victorian age. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

ENGL 306 Modern British Literature 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, and 213
Examines major works and trends in modern British literature, such as modernism or key fiction writers, dramatists, or poets during the first half of the twentieth century. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

ENGL 307 Contemporary British Literature 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Examines major works and trends in contemporary British literature, such as late modernism, postmodernism, the age of diminishment, or key novelists, dramatists, and/or poets from the period 1945 to the present. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

ENGL 310 Public Speaking 3c-0l-3sh
Prerequisite: ENGL 101
Fundamental principles of public speaking, audience analysis, interest and attention, and selection and organization of speech material.

ENGL 311 Oral Interpretation 3c-0l-3sh
Prerequisite: ENGL 310
Emphasizes understanding and appreciation of literature through developing skill in reading aloud.

ENGL 312 Speech-Persuasion 3c-0l-3sh
Prerequisites: ENGL 202, 310
Advanced study of problems involved in influencing an audience.

ENGL 313 The Rhetorical Tradition 3c-0l-3sh
Prerequisites: ENGL 101, 310
Survey of rhetorical theory from Greek and Roman through modern times.

ENGL 314 Speech and Communication in the Secondary English Classroom 3c-0l-3sh
Prerequisites: ENGL 122, 202
Offers students practical and theoretical approaches to relationships between oral and written communication. The course is performance based (involving a variety of communication activities) and knowledge based (involving study of research on language arts relationships). An emphasis is given to integration of the four language arts for improving teachers' own communication skills as well as those of their students.

ENGL 315 American Literature to 1820 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
The beginnings of American literary cultures from sixteenth-century pre-Columbian indigenous contacts with European explorations, through diverse

colonializations (Hispanic, French, and British) including the importation of African slaves, up to the American Revolution and emergent U.S. literary nationalism in the first decades of the nineteenth century. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

ENGL 316 American Literature 1820-1880 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, and 213
Examines major works and trends in U.S. literature, from the Federalist, Romantic, and/or Realistic periods. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

ENGL 317 American Literature 1880-1940 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Examines representative U.S. writers during 1880-1940. Includes traditional figures as well as writers who have recently entered the canon. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

ENGL 318 Literature for Adolescents 3c-0l-3sh
Prerequisites: ENGL 101, 122, or permission, English Education major
Surveys poetry, drama, and fiction with which the adolescent is familiar through school work and personal reading.

ENGL 319 American Literature 1930-present 3c-0l-3sh
Prerequisites: ENGL 202 and at least two courses from ENGL 210, 211, 212, 213
Additional prerequisites for B.A. English majors: ENGL 210, 211, 212, 213
Focuses on various movements, themes, genres, and authors writing in the United States since 1930. Not a survey course; each section will develop an extended treatment of a particular topic selected by the instructor. Emphasizes writing by living writers to develop an understanding of the diversity, formally and thematically, of current U.S. literary production across genders and ethnicities.

ENGL 320 Advanced Composition II 3c-0l-3sh
Prerequisites: ENGL 202, 220
A workshop and tutorial atmosphere for students who intend to write or teach writing.

ENGL 322 Technical Writing I 3c-0l-3sh
Prerequisite: ENGL 202
Focuses on helping the student to acquire and to apply communication skills essential to the technical and professional writer.

ENGL 323 Teaching Literature and Reading in the Secondary School 3c-0l-3sh
Prerequisites: ENGL 122, 202
Introduces students to the theory and research on teaching literature and reading in the secondary school. Reviews reader-response literary theory and classroom-based research on teaching literature. Also reviews socio-psycholinguistic reading theory and classroom-based research on teaching reading.

ENGL 324 Teaching and Evaluating Writing 3c-0l-3sh
Prerequisites: ENGL 122, 202, English Education major or permission
A study of modern approaches to the teaching of writing, including current theories on the composing process, as well as instruction in evaluating, including holistic scoring. Includes practice in writing.

ENGL 325 Creative Writing: Poetry 3c-0l-3sh
Prerequisites: ENGL 221, permission of instructor based on samples of student's work
A writing workshop for students who wish to focus intensively on the writing and revision of poetry and on developing an audience for one's works.

ENGL 326 Creative Writing: Fiction 3c-0l-3sh
Prerequisites: ENGL 221, permission of instructor based on samples of student's work
A writing workshop for students who wish to write fiction under the guidance of an instructor. Focuses intensively on the writing and revison of prose fiction and on developing an audience for one's works.

ENGL 329 The History of the English Language 1c-0l-1sh
Prerequisite: ENGL 202
Studies historical development of the English language, as a basis for a better understanding of modern American English.

ENGL 330 The Structure of English 3c-0l-3sh
Prerequisite: ENGL 202
An introduction to the fundamentals of language study with an equal emphasis on the sound, word, sentence, meaning, and discourse patterns of English. Educationally relevant topics, such as applications of linguistics to the teaching of English language and literature, varieties of grammar, and linguistic descriptions of styles and registers are an integral part of the course. Course is a prerequisite for EDUC 452.

ENGL 332 Advanced Film 3c-0l-3sh
Prerequisites: ENGL 101, 208
Offers a close examination of classic and contemporary films and film theory from a variety of critical perspectives: spectatorship, cinematic authorship, feminism, historiography, genre, and cultural studies. Pays special attention to the treatment of women and African-Americans in film.

ENGL 333 Psycholinguistics 3c-0l-3sh
Prerequisite: ENGL 202
Concerns the interrelation between language system and behavior and various factors of human psychology. Surveys developments since the 1940s, including relationships between language and perception, biology, memory, meaning, and cognition, as well as oral and written behavior. Students of language and literature may improve their assumptions about how human beings use language.

ENGL 334 ESL Methods and Materials 3c-0l-3sh
Prerequisite: Junior standing or permission of the instructor
An introduction to English as a Second Language theory and practice. Aims: (1) general understanding of current theory and methods of teaching ESL; (2) ability to select appropriate, and adapt existing, materials for elementary and high school ESL students. Recommended for all English teachers who expect to have ESL students in their classes.

ENGL 335 The Essay 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Focuses on the creation and development of the essay in English, its form and content, from its beginnings to the present. Students will begin by studying Francis Bacon, the first English essayist, and follow the evolution of the form to the present day.

ENGL 336 Language, Gender, and Society 3c-0l-3sh
Prerequisites: ENGL 202, junior standing
Investigates the various ways that language and gender interact and intersect in society. Examines such questions as: Does society use language to favor one sex over the other? Why is language a crucial component in formulating constructs of masculinity and femininity? What stereotypes of gender-based language are promoted in our society? How can we analyze language to reveal disparate views and treatment of the sexes?

ENGL 337 Myth 3c-0l-3sh
Prerequisites: ENGL 202 and at least two courses from ENGL 210, 211, 212, 213
Additional prerequisites for B.A. English majors: ENGL 210, 211, 212, 213
Examines the nature and function of the mythic experience and explores the archetypal patterns of myths from various cultures. (Offered as EN 370 Myth and Literature prior to Spring, 1998)

ENGL 338 Oral Literature 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Acquaints students with the nature of oral composition, the habits of thought that orality fosters, and the particular mode of awareness the oral dimension of literature demands of an audience (and awakens in a reader). At the conclusion of the course students should have an understanding of the formulaic nature of such purely oral forms as the ballad and the epic and an awareness of the manner in which orality patterns thought differently from writing, and they should be able to detect oral features and patterns in works of literature from cultures not primarily oral but containing a high "oral residue." (Offered as EN 353 The Oral Dimension prior to Spring, 1998)

ENGL 344 Ethnic American Literature 3c-0l-3sh
Prerequisites: ENGL 202 and at least two courses from ENGL 210, 211, 212, 213
Additional prerequisites for B.A. English majors: ENGL 210, 211, 212, 213
Concerned with ethnic U.S. experiences as expressed in poetry, fiction, drama, and autobiography. The topic will vary and be announced in advance. Examples include Asian-American, Hispanic, Irish-American, Jewish-American, and Native-American literatures.

ENGL 348 African-American Literature 3c-0l-3sh
Prerequisites: ENGL 121 or 122 and 202
Primarily nineteenth- and twentieth-century African-American literature (poetry, fiction, nonfiction); includes works by Frederick Douglass, W.E.B. Du Bois, spirituals and folk poetry, Harriet B. Wilson, Jean Toomer, Richard Wright, Audrey Lorde, and Toni Morrison. The emphasis will be on historical context and an Afrocentric approach.

ENGL 349 English Bible as Literature 3c-0l-3sh
Prerequisites: ENGL 121 or 122 and 202
Considers literary aspects of the English Bible by relating earlier translations to the Authorized Version of 1611 and by tracing some of the major influences of the King James Bible upon writers and speakers of modern English. Offers a close reading of the major narrative and poetic portions of the Old Testament.

ENGL 354 Classical Literature in Translation 3c-0l-3sh
Prerequisites: ENGL 122, 202
Masterpieces studied range from those of ancient Greece to Middle Ages. English literature and American literature excluded. (Offered as EN 345 prior to Spring, 1998)

ENGL 356 Film Theory 3c-0l-3sh
Prerequisites: ENGL 101, 208
An introduction to major film theories, studied in relation to representative films. Details the complex relationship between film production and film theory; i.e., how theorists have attempted to explain what appears on the screen, its impact, and its relation to "reality," and how filmmakers have responded to the works of theorists (with the two sometimes being the same). Goes far deeper into understanding film than ENGL 208, which focuses mainly on how film is constructed through aesthetic and institutional processes.

ENGL 357 Major Figures in Film 3c-0l-3sh
Prerequisites: ENGL 101, 208
Studies major artists and their contributions to the development of film as an art form from its beginnings to the present. Close analyses of directors, cinematographers, editors, screenwriters, or actors-as individuals or as representatives of a movement in film. Topics will vary from semester to semester; thus, one semester may concentrate on a specific director such as Alfred Hitchcock; another semester might study women (as directors, actresses, and editors); and yet another semester might study a collective movement such as film noir.

ENGL 385 Advanced Women's Literature 3c-0l-3sh
Prerequisites: ENGL 202 and for non-majors ENGL 225
Considers issues of genre and canon revision and why particular genres may have particular appeal for women writers. While many of our readings will be by "literary women," we will also consider works by women who were professionals in nonliterary disciplines.

ENGL 386 Regional Literature in English 3c-0l-3sh
Prerequisites: ENGL 202 and at least two courses from ENGL 210, 211, 212, 213
Additional prerequisites for B.A. English majors: ENGL 210, 211, 212, 213
Examines the contributions of a particular region to national literature. The focus of the course might be any of the following: Appalachian writers, local color writers, New England writers, Southern writers, writers of the American West, or Canadian writers.

ENGL 387 Irish Literature 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
An introduction to Irish literature since 1800, with particular emphasis on the Literary Revival in the early twentieth century. Key authors include Yeats, Joyce, Synge, O'Casey, Edgeworth, Somerville and Ross, Gregory, Beckett, and Heaney. The development of Irish writing will be examined within the contexts of Irish history, language, culture, and politics.

ENGL 390 Literary Tour: Britain var-3sh
Offered selected summers, for five weeks during the first or second summer session. Visits London, Stratford, and Cambridge or Oxford, as well as other places important in English literature.

ENGL 391 Selected Works from the Medieval Period 3c-0l-3sh
Prerequisites: ENGL/FNLG 121 or ENGL 122, ENGL 202
Comparative study of selected works of major importance per se and as representative of major themes of medieval European literature. Also listed as FNLG 391.

ENGL 393 Romanticism 3c-0l-3sh
Prerequisites: ENGL/FNLG 121 or ENGL 122, ENGL 202
A study of the principal authors and works of late eighteenth-century and early nineteenth-century Europe and the unique national characteristics of the Romantic movement in lyric, drama, and prose. Also listed as FNLG 393.

ENGL 394 Nineteenth-Century European Novel in Translation 3c-0l-3sh
Prerequisites: ENGL/FNLG 121 or ENGL 122, ENGL 202
A survey of major nineteenth-century European novels in translation (excluding English), emphasizing the rise of realism and naturalism and the cultural, historical, social, and artistic relationships between the various national literatures. Also listed as FNLG 394.

ENGL 395 Selected Writers from Twentieth-Century Europe 3c-0l-3sh
Prerequisites: ENGL/FNLG 121 or ENGL 122, ENGL 202
Comparative study of selected works of major importance per se or as representatives of major trends in twentieth-century literature. Also listed as FNLG 395.

ENGL 396 The Literature of Emerging Nations 3c-0l-3sh
Prerequisites: ENGL/FNLG 121 or ENGL 122, ENGL 202
A comparative study of a selection of literature written in major European languages but originating in the nations of the developing world. Works will be mainly prose fiction (although essay, theater, and poetry may be included) and reflect a diversity of geographical, cultural, and prior colonial circumstances. Also listed as FNLG 396.

ENGL 401 Advanced Literary Theory and Criticism 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Acquaints students with major issues and problems in literary theory. Rather than survey the history of criticism and theory, this course focuses on modern and contemporary critical schools and methods. The purpose is to introduce students to a select group of influential theories and theorists and how such theories impact the way we read, study, and teach literature and cultural studies.

ENGL 420 Special Writing Applications 3c-0l-3sh
Prerequisite: ENGL 220
Offers students who are well into their disciplines "forums" for advanced reading and writing about the cultural, professional, and personal uses of textual knowledge. Students will read, analyze, and compose essays that build meaning around disciplinary knowledge, independent reading, and personal or preprofessional experience. They will be encouraged to make connections between disciplinary knowledge and emerging knowledge or experience.

ENGL 422 Technical Writing II 3c-0l-3sh
Prerequisite: ENGL 322
An advanced workshop/tutorial that provides intensive instruction in technical writing. Technical Writing II builds on the basics of audience, readability, proposals and reports, letters, memos, and resumes which are covered in Technical Writing I. Describes the writer's role in such areas as legal and ethical aspects of technical communication; planning, testing, reviewing, and evaluating documents; and proofreading and editing.

ENGL 430 Major British Author 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Examines major works of a single major author, including biographical, literary, and cultural contexts. Places the author within both intellectual/cultural history and literary developments. Major author studied in a particular semester to be announced in advance.

ENGL 432 Chaucer 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Studies Chaucer, his life, his language, the development of his literary style, and his art, with and through his major poetical works. (Offered as EN 340 prior to Spring, 1998)

ENGL 434 Shakespeare 3c-0l-3sh
Prerequisites: ENGL 202 and at least two courses from ENGL 210, 211, 212, 213
Additional prerequisites for B.A. English majors: ENGL 210, 211, 212, 213
Studies Shakespeare's development as a poetic dramatist against background of Elizabethan stage; examines audience, textual problems, language imagery, and philosophy. (Offered as EN 341 prior to Spring, 1998)

ENGL 436 Major American Authors 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Studies in the literary output of a major American author or authors against the background of the social and literary milieus in which the works were created. Specific subject or subjects to be announced by the instructor. (Offered as EN 343 prior to Spring, 1998)

ENGL 460 Topics in Film 3c-0l-3sh
Prerequisites: ENGL 101, 208
Selected films dealing with a specific, advanced topic will be viewed and assessed to explore the different roles that film plays. Topic to be announced in advance.

ENGL 461 Topics in British Literature 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Examines major works of a particular topic in British literature by focusing on its cultural and literary contexts. Topic to be announced in advance.

ENGL 462 Topics in American Literature 3c-0l-3sh
Prerequisites: ENGL 202, 210, 211, 212, 213
Examines major works of a particular topic in American literature by focusing on its cultural and literary contexts. Topic to be announced in advance.

ENGL 480 Seminar: Studies in English and American Literature var-3sh
Prerequisites: ENGL 101, 122, 202
Corequisites: ENGL 211, 212, 213, or permission
A seminar experience designed for advanced students. Students considering graduate work in English might well wish to enroll, but students with a variety of career goals—business, industry, law, government service—can take advantage of this opportunity to plan a schedule of independent study with the help of a faculty mentor.

ENGL 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Vary from semester to semester covering such diverse topics as autobiography, science fiction, folklore, the political novel, black theater, etc.

ENGL 482 Independent Study var-1-6sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ENGL 493 Internship var-3-12sh
On-the-job training opportunities in related areas. Application and acceptance to internship program required.

EOPT Electro-Optics (@)

Department of Physics
College of Natural Sciences and Mathematics

@ New program and courses pending Council of Trustees and State System of Higher Education approval

EOPT 105 Computer Interfacing in Electro-Optics 2c-3l-3sh
Designed to teach the fundamentals of interfacing the personal computer to its physical surroundings such as electro-optics equipment. The students will do graphical programming and learn how to use virtual instruments in order to collect data and to control experiments. The students will use a program that employs graphical block diagrams that compile into machine code. Includes a lab component.

EOPT 110 Geometric Optics 2c-3l-3sh
Corequisite or Prerequisite: PHYS 100
Introduces the student to the principles and theory of light as a geometric ray and gives an elementary treatment of image formation. Topics include reflection, refraction, prisms, lenses, mirrors, pupils, stops, aberrations, optical instruments, aspherical surfaces, and optical system design and evaluation. Includes a lab component.

EOPT 120 Wave Optics 2c-3l-3sh
Prerequisite: EOPT 110
Corequisite or Prerequisite: MATH 110 or 121
Designed to provide the student with the basic knowledge of the wave nature of light. Topics include spectral characteristics of light, propagation of light, interference, diffraction, polarization, windows, filters, beam splitters, and gratings. Includes a lab component.

EOPT 125 Introduction to Electronics 3c-3l-4sh
Corequisite or Prerequisite: MATH 110 or 121
Designed to introduce students to basic analog and digital electronics. Emphasis will be placed on direct current (DC) circuits and networks utilizing Ohm's Law and focused upon the use of electronic instrumentation and design using operational amplifiers as "black box" building elements. In addition, the digital component of the course will cover basic digital logic and its implementation in hardware using integrated circuit based logic gates and counters. Includes a lab component.

EOPT 210 Detection and Measurement 2c-3l-3sh
Prerequisites: EOPT 120 and 125
Covers electronic amplification, optical detectors, and the measurement of small distances using interference effects. Operational amplifiers are used to build circuits to measure the output of photon and thermal detectors. In order to accurately measure properties such as wavelengths, absorption of wavelengths, defects in lenses, prisms, and flat plates, the following instruments are used by the students: monochromators, spectrophotometers, and interferometers. Includes a lab component.

EOPT 220 Introduction to Lasers 2c-3l-4sh
Prerequisite: EOPT 120
Different types of incoherent light sources will be discussed and investigated. The concepts of laser safety will be introduced. The elements and operation of an optical power meter will be covered. The energy-level diagrams and the energy-transfer processes in the active medium will be discussed. The spatial and temporal properties of lasers will be investigated along with other characteristics such as modes of oscillation. Some applications of lasers will be investigated. Includes a lab component.

EOPT 240 Fiber Optics 2c-3l-4sh
Prerequisite: EOPT 120
Covers basic concepts in fiber optics such as dispersion, attenuation, and single-mode and multimode propagation. Fiber optic test equipment such as optical time domain reflectometers and optical power meters will be discussed and investigated. Sources, detectors, and optical amplifiers will be covered. Includes a lab component.

EOPT 250 High-Vacuum Technology 2c-3l-3sh
Prerequisite: PHYS 116
The student will learn how to produce and measure a vacuum. The properties of gases and the concepts of fluid flow and pumping will be presented. Many different kinds of vacuum pumps will be discussed in detail. The concept of measuring a vacuum will be introduced through the discussion of vacuum gauges and gas analyzers. The techniques of leak detection and thin film deposition will be covered. The concept of ultrahigh vacuum will be touched upon. Includes a lab component.

EOPT 260 Industrial Applications of Lasers 2c-3l-3sh
Prerequisite: EOPT 220
Laser power and energy measurements will be made. The theory and applications of industrial lasers will be covered. Material processing such as welding, cutting, and hole drilling will be discussed, implemented, and analyzed. The role of optics in laser machining will be covered. Laser safety will be emphasized throughout the course. Includes a lab component.

FCSE Family and Consumer Sciences Education

Department of Human Development and Environmental Studies
College of Health and Human Services

FCSE 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

FCSE 350 Teaching Family Life Education 3c-0l-3sh
Prerequisites: FCSE 250, EDUC 242
Corequisite: EDSP 302
The emphasis will be on teaching family life education in family and consumer sciences classrooms and through community organizations and agencies. Lessons are planned and implemented using a variety of instructional methods incorporating adaptations and modifications for special needs learners, basic skills, global concerns, and use of a problem-solving decision-making approach. Planning of content, learning activities, instructional materials, and evaluation based on clearly stated objectives are emphasized. A microcomputer spreadsheet is utilized to manage a department budget and a gradebook. Participation in professional organization activities is expected.

FCSE 450 Teaching Vocational Home Economics 3c-0l-3sh
Prerequisite: FCSE 350
The emphasis is on teaching vocational family and consumer sciences in consumer/homemaking and occupational family and consumer sciences programs. Federal legislation impacting on family and consumer sciences is analyzed for use in program decisions. An emphasis is given to program development using CBVE model, development of individual learning packets, vocational youth organizations, advisory committees, family and consumer sciences and vocational educational priorities, professional organizations, proposal development for funding, impact on public policy, marketing family and consumer sciences, and development of a personal philosophy of family and consumer sciences education.

FCSE 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

FCSE 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Upper-level students with high scholastic achievement pursue their particular interests outside the realm of the organized home economics education curriculum. May be taken more than once to a maximum of 3sh. Approval is based on academic appropriateness and availability of resources.

FDED Foundations of Education

Department of Foundations of Education
College of Education and Educational Technology

FDED 102 American Education in Theory and Practice 3c-01-3sh
Designed to familiarize prospective teachers with the history and philosophy of American education and with some of the practical aspects of teaching in the American public school classroom. (Offered as FDED 202 prior to 2001-02)

FDED 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

FDED 440 Orientation to Teaching in Urban Centers 3c-0l-3sh
Provides students with an understanding of learners and their unique learning needs and conditions. The emphasis will be on understanding the origin of attitudes and values and how these affect the relationships which exist between students and teachers. Special attention to practical application of theoretical information to problems of urban education. Field trips and guest speakers will be emphasized.

FDED 441 Field Experiences in Urban Centers var-1-6sh
Prerequisite: FDED 440
Provides specialized experience for students desiring to teach in inner-city schools. Aspects to be emphasized include physical characteristics of community, background and aspirations of children and youth, and specialized teacher competencies, classroom management, planning, instructional materials, teaching strategies, and evaluations. Records of comprehensive experiences in urban areas will be considered in making field experience assignments. Schools selected for student experience will be located in Pittsburgh.

FDED 442 Interpreting Urban/Field Experiences var-3sh
Prerequisites: FDED 440, 441
Evaluation of learning and behavior problems encountered during field experience in urban schools. Flexible approach stressed to encourage wide range of investigation and exploration of psychological and sociological problems as they affect education. Supervision and guidance for investigating specific problems provided by specialists from psychology, sociology, and education who will function as resource personnel giving direction. Enables students to combine experiences gained by teaching in urban schools with recent and pertinent theoretical information.

FDED 454 Public School Administration 3c-0l-3sh
The study of the development of public school administration; current organizational patterns for public education at the local, county, state, and national levels; and the impact of administration upon the total educational program.

FDED 456 Issues and Trends in Education 3c-0l-3sh
Critical analysis of issues and trends in education with emphasis on philosophical and social dimensions of topics covered. Attention to work of some major contemporary critics of education.

FDED 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

FDED 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

FDNT Food and Nutrition

Department of Food and Nutrition
College of Health and Human Services

FDNT 110 Careers in Food and Nutrition 1c-0l-1sh
Career possibilities for nutrition majors are explored. Students will be guided in clarifying their professional goals and will become acquainted with the educational and experiential requirements necessary to attain these goals.

FDNT 143 Nutrition and Wellness 3c-0l-3sh
Introduces the student to the major components of wellness: contemporary nutrition issues as they relate to personal food choices, physical fitness, stress management, sexually transmitted diseases, AIDS, and substance abuse. Completion of FDNT 143 fulfills the Liberal Studies Health and Wellness requirement.

FDNT 145 Introduction to Nutrition 3c-0l-3sh
Provides students with an understanding of essential nutrients and their roles in the body, as well as the changing nutritional needs of an individual throughout the lifespan. Includes the impact of exercise and food choices on metabolism, body composition, and weight control; nutrition misinformation; consumer issues; commercially prepared foods; and major diseases that are affected by eating behaviors.

FDNT 150 Foods 3c-0l-3sh
Prerequisite: CHEM 101 or 111
Corequisite: FDNT 151
Basic principles of food: composition, sanitation, preparation, and preservation.

FDNT 151 Foods Laboratory 1c-3l-1sh
Corequisite: FDNT 150
Application of basic principles of food preparation.

FDNT 212 Nutrition 3c-0l-3sh
Prerequisite: CHEM 102 or 112
Sources and functions of nutrients, interdependence of dietary essentials, and nutritive value of an optimum diet are studied. Attention given to varied conditions in human life.

FDNT 213 Life Cycle Nutrition 3c-0l-3sh
Prerequisite: FDNT 212
A detailed study of nutrition which applies information from FDNT 212 to all stages of the life cycle; current issues and research as they impact on these developmental stages.

FDNT 245 Sports Nutrition 3c-0l-3sh
Prerequisite: FDNT 145 or 212
Emphasizes knowledge and application of sports nutrition principles. The impact of the macro- and micro-nutrients on physical performance will be discussed in light of current scientific research and applied to realistic dietary recommendation for all types and levels of athletes.

FDNT 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered

under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

FDNT 355 Nutrition in Disease I 3c-0l-3sh
Prerequisites: FDNT 212, BIOL 155 or 150-151
Basic tools for diet modification: food exchange systems; interviewing techniques; nutrition assessment; professional practice; dietary treatment of caloric imbalance, diabetes, and cardiovascular disease. Taught Fall semester only.

FDNT 357 Special Problems in Foods 0c-4l-3sh
Prerequisite: FDNT 150
Individual problems in foods investigated with emphasis on identified weaknesses in the student's knowledge of food.

FDNT 362 Experimental Foods 2c-3l-3sh
Prerequisites: FDNT 150, FDNT 355 or concurrently, MATH 217
The experimental study of foods, relating chemical and physical properties to reactions and processes occurring in food systems.

FDNT 364 Methods of Teaching 3c-0l-3sh
Prerequisite: FDNT 213
Current teaching techniques and resource materials in nutrition education emphasized. The emphasis includes all forms of nutrition education, including classroom instruction, in-service training of employees, and community-based education.

FDNT 402 Community Nutrition 3c-0l-3sh
Prerequisite: FDNT 212
Nutritional implications of both good and poor nutrition for all age groups in home and community situations are studied. Corrective and preventive measures emphasized. Taught Spring semester only.

FDNT 410 Food, Nutrition, and Aging 3c-0l-3sh
Prerequisite: Junior status
Relationship of food to health maintenance and special dietary problems during the middle and later years.

FDNT 430 Professional Topics in Food and Nutrition 3c-0l-3sh
Prerequisites: FDNT 355, FDNT 364, HRIM 356, and PSYC 101
Topics include promoting food and nutrition services and programs, career planning and development, ethical challenges to dietitians, quality assurance standards, and impact on the legislative process.

FDNT 444 Food Composition and Biochemistry 3c-0l-3sh
Prerequisite: CHEM 255
Basic chemistry and biochemistry of essential components of food originating from plant and animal sources.

FDNT 447 Nutritional Aspects of Food Technology 3c-0l-3sh
Prerequisites: BIOL 232 and FDNT 212; junior status
A study of current known effects of food processing techniques on the nutritional value and safety of foods.

FDNT 455 Nutrition in Disease II 3c-0l-3sh
Prerequisite: FDNT 355
Dietary treatment of disorders of the gastrointestinal, renal, cardiovascular, and hepatic systems; inborn errors of metabolism; allergies; cancer. Therapeutic quackery. Food sampling experiences. Taught Spring semester only.

FDNT 458 Advanced Human Nutrition 4c-0l-4sh
Prerequisites: CHEM 255 or 351, FDNT 355, MATH 217
In-depth study of the nutrients and their function within the cell. Incorporation of the principles of physiology and biochemistry in the study of nutrition. An emphasis will be placed on applying current research and evaluation of research methodology. (Does not count toward M.S. in Food and Nutrition degree requirements)

FDNT 461 Microwave Cooking Technology 2c-2l-3sh
The study of the electronic technology, selection, care, and use of the microwave oven. Basic physical and chemical concepts related to microwave cooking are included. Individual investigative research problems are required.

FDNT 462 Advanced Experimental Foods 1c-4l-3sh
Prerequisites: FDNT 362, CHEM 231
An experimental approach to the many factors influencing the chemical and physical properties of food. Use of the scientific method in developing an individual project combining an evaluation of current literature and appropriate sensory and analytical methodology.

FDNT 463 Nutrition Counseling 2c-3l-3sh
Prerequisites: FDNT 355, PSYC 101, FDNT 455 or concurrently
Use of intervention strategies in prevention and treatment of disease through diet. Supervised practicum (3 hours per week) counseling clientele in normal and therapeutic nutrition.

FDNT 464 Food and Nutrition Research Methods 3c-0l-3sh
Prerequisites: FDNT 362, 458, CHEM 351, and MATH 217
An introduction to research methodology in foods and nutrition. Includes theory and techniques of physical, chemical, and instrumental analysis. Applications of these methods to food and animal models with statistical analysis of data.

FDNT 470 Human Food Consumption Patterns 3c-0l-3sh
Prerequisites: One social science course and junior standing
Exploration of human food consumption behaviors from food production to individual and societal consumption patterns. Influencing factors which will be discussed include agronomic, economic, geographic, sociologic, nutritional, political, and psychological factors. The ethics and morality of food distribution will be discussed. Students may not enroll in this course if they have taken the corresponding section of LBST 499.

FDNT 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

FDNT 482 Independent Study var-1-6sh
Prerequisites: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office; must have earned 60sh
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

FDNT 484 Senior Seminar 1c-0l-1sh
Prerequisite: Senior status
The emphasis will be on individual review of food and nutrition literature with formal presentation and discussion of current research.

FDNT 493 Internship var-6-12sh
Prerequisite: Must have earned 57sh
An opportunity for students to work away from the university in supervised job situations at health care facilities, restaurants, or other institutional food service or lodging establishments. Objective is to provide students with job-related experiences. Must meet university internship requirements.

Note: White uniforms including white shoes are required for all lab courses where food is prepared. Students must meet the professional dress requirements of the department.

FIAR Fine Arts

College of Fine Arts

FIAR 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

FIAR 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

FIAR 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

FIAR 493 Internship var-3-12sh
Covers the areas of the visual and performing arts.

FIN Finance

Department of Finance and Legal Studies
Eberly College of Business and Information Technology

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course. Business majors (except those majoring in Business Education) who have not achieved Junior Standing are normally not permitted to enroll in 300- or 400-level courses.

FIN 220 Essentials of Finance 3c-0l-3sh
Provides students with a survey of three fundamental areas of finance: 1) Corporate Finance, 2) Basic Investment, and 3) Financial Intermediation and the Monetary System. Students will be introduced to financial analysis, planning, and control; to the management (the acquisition and allocation) of funds; and to the fundamentals of the time value of money and capital budgeting. Students will be familiarized with the basic investment markets, fundamental and technical analysis, and portfolio analysis. Students will also consider the influence of government and financial institutions on interest rates, sources of finance, investment of funds, and finance in general. (Offered for Associate Degree Program only; may not be used as a substitute for FIN 310)

FIN 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

FIN 310 Finance I 3c-0l-3sh
Prerequisites for business majors: ACCT 202, MATH 214
Prerequisites for non-business majors: ACCT 202, MATH 214 or 217 (MATH 214 recommended)
The study of the methods of securing and managing funds on short, intermediate, and long-term bases. The financial analysis, planning, and control of a corporation. Also covered is working capital management.

FIN 320 Finance II 3c-0l-3sh
Prerequisites: FIN 310, upper division only
Continues FIN 310 and covers topics on long-term external financing of the firm, capital budgeting, valuation of the firm, mergers, international business finance, and business failures.

FIN 322 Life Insurance 3c-0l-3sh
Prerequisite: FIN 310
Comprehensive study of that insurance which provides protection against the economic loss caused by termination of earning capacity. Analysis benefits, underwriting, rate making, and legal doctrines.

FIN 324 Principles of Investments 3c-0l-3sh
Prerequisite: FIN 310
An analysis of various types of securities and other forms of investment possibilities and a study of sound investment policies from a corporate viewpoint. Factors influencing the general movement of security prices and the return from investments are considered.

FIN 355 Financial Analysis Using Lotus 1-2-3 3c-0l-3sh
Prerequisites: BTED/COSC/IFMG 101 and FIN 310
Develops the financial students' computer modeling and analysis skills. Students will be taught how to utilize current computing resources, electronic spreadsheet, and other computing software to analyze, model, and solve a variety of financial problems.

FIN 385 Securities and Commodities Markets 3c-0l-3sh
Prerequisites: FIN 320, 324
The study of the structure of security and commodity markets; the nature of speculative transaction and methods of trading; analysis of pricing; and the objectives of security and commodity market regulation.

FIN 410 Financial Institutions and Markets 3c-0l-3sh
Prerequisite: FIN 324
Review of the entire structure of financial institutions, money, and capital markets, of which the business enterprise is both a supply and demand factor, and structure and dynamics of interest-rate movements.

FIN 420 Investment Analysis 3c-0l-3sh
Prerequisites: FIN 320, 324
Integrates the work of the various courses in the finance areas and familiarizes the student with the tools and techniques of research in the different areas of investments.

FIN 422 Seminar in Finance 3c-0l-3sh
Prerequisites: FIN 320, 324, seniors only
Primarily for the senior Finance major, covers topics in all areas of finance by using recent articles, cases, discussions, speakers, and a financial simulation game.

FIN 424 International Financial Management 3c-0l-4sh
Prerequisite: FIN 310
The financial management concepts, useful in a single-country context, are adapted for the international variables and constraints caused by being international. Provides an insight into unique issues and problems the manager of the multinational enterprise will face, such as working capital management; capital budgeting process; financing and investing abroad; capital and money markets; foreign exchange markets; and risk management.

FIN 481 Special Topics var-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

FIN 482 Independent Study var-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

FIN 493 Finance Internship var-3-12sh
Prerequisites: FIN 320, 324, consent of chairperson and dean
Practical experience in the finance field. Note: FIN 493 can be taken, if the student qualifies, as a general elective. It does not fulfill the major-area elective requirement.

FNLG Foreign Languages

Study Abroad and Comparative Literature
(Foreign Language)
College of Humanities and Social Sciences

FNLG 100 Study Abroad var-1-12sh
Registration mechanism and limited credit arrangement as provided in preapproval process for Study Abroad programs coordinated through the International Affairs Office.

FNLG 121 Humanities Literature 3c-0l-3sh
Introduces the student to works, authors, and genres of general literary significance in the Western tradition. Not organized historically but trains the student in the critical reading and appreciation of literature from the present and other periods. Authors, works, and themes are studied with respect to cultural context, aesthetic form, and thematic significance. Taught in English. Substitutes for ENGL 121.

FNLG 391 Selected Works from the Medieval Period 3c-0l-3sh
Prerequisites: ENGL/FNLG 121 or ENGL 122, ENGL 202
Comparative study of selected works of major importance per se and as representative of major themes of medieval European literature. Also listed as ENGL 391.

FNLG 392 Renaissance/Baroque/Classical 3c-0l-3sh
Prerequisites: ENGL/FNLG 121 or ENGL 122, ENGL 202
Literary works representing various genres from both periods are studied and compared for their themes, motifs, and stylistic features, applying principles set forth in H. Wolffin's *Renaissance and Baroque*.

FNLG 393 Romanticism 3c-0l-3sh
Prerequisites: ENGL/FNLG 121 or ENGL 122, ENGL 202
The study of the principal authors and works of late eighteenth- and early nineteenth-century Europe and the unique national characteristics of the Romantic movement in lyric, drama, and prose. Also listed as ENGL 393.

ENLG 394 Nineteenth-Century European Novel in Translation 3c-0l-3sh
Prerequisites: ENGL/ENLG 121 or ENGL 122, ENGL 202
A survey of major nineteenth-century European novels in translation (excluding English), emphasizing the rise of realism and naturalism and the cultural, historical, social, and artistic relationships between the various national literatures. Also listed as ENGL 394.

ENLG 395 Selected Writers from Twentieth-Century Europe 3c-0l-3sh
Prerequisites: ENGL/ENLG 121 or ENGL 122, ENGL 202
Comparative study of selected works of major importance per se or as representatives of major trends in twentieth-century literature. Also listed as ENGL 395.

ENLG 396 The Literature of Emerging Nations 3c-0l-3sh
Prerequisites: ENGL/ENLG 121 or ENGL 122, ENGL 202
A comparative study of a selection of literature written in major European languages but originating in the nations of the developing world. Works will be mainly prose fiction (although essay, theater, and poetry may be included) and reflect a diversity of geographical, cultural, and prior colonial circumstances. Also listed as ENGL 396.

ENLG 421 Language and Society 3c-0l-3sh
Considers salient facts of language and its role in society and culture. Language families, linguistic change, and reciprocal influences of culture and language are presented.

ENLG 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

FRNC French

Department of French and German
College of Humanities and Social Sciences

FRNC 101 Basic French 4c-0l-4sh
For the student beginning the study of French or who needs remedial study before beginning the intermediate sequence. Primary emphasis is on the mastery of French pronunciation and oral communication. Students will learn to converse in simple present time and become acquainted with location of Francophone populations and elements of their daily lives. Attendance and Foreign Language Learning Center practice is required.

FRNC 201 College French I 3c-0l-3sh
The initiation of college-level mastery of basic language skills and exposure to cultural materials. Supplements beginners' oral competency with more advanced reading and writing. The emphasis will be on narration in the past. Efforts are made to practice skills and comprehend texts in authentic cultural contexts. Liberal Studies elective credit is given for this course.

FRNC 202 College French II 3c-0l-3sh
Prerequisite: FRNC 201 or equivalent
Continues the college-level mastery of language skills. The ability to narrate present and past is intended to express opinion and hypothesis. The emphasis is on acquiring greater skill in reading literary and cultural texts. Liberal Studies elective credit is given for this course.

FRNC 203 Accelerated College French 6c-0l-6sh
Develops listening and speaking skills through an immersion method. Students use present, past, and future to indicative tenses in intensive aural/oral interaction and are expected to make use of the audio and video capabilities of the Foreign Language Learning Center on a weekly basis. Liberal Studies elective credit is given for this course.

FRNC 253 Intermediate Composition and Conversation 3c-0l-3sh
Intermediate course in grammar, reading, composition, and some oral work. Can substitute for or be in addition to FRNC 202 for majors or serious students.

FRNC 254 Civilization of Modern France 3c-0l-3sh
Prerequisite: FRNC 202 or equivalent
A study of modern French culture and civilization—social institutions, government, industry, economics, and geography. Development of all language skills for use in business situation in French-speaking environment. The emphasis will be on acquisition of an active knowledge of the business world.

FRNC 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

FRNC 301 Portraits of Women in the French Novel 3c-0l-3sh
Explores the polarity of the treatment of female characters in the French novel. Explores differences of treatment by male and female writers through inclusion of women novelists. Provides a chronological survey of the development of the novel in France from the seventeenth to the twentieth centuries.

FRNC 331 Intermediate French Conversation 3c-0l-3sh
Prerequisite: FRNC 202
An emphasis will be placed on development of communication skills, vocabulary, and discourse strategies. Activities include directed conversations, video- and audio-based listening comprehension, and role play and other simulations.

FRNC 341 French Grammar 3c-0l-3sh
Prerequisite: FRNC 202
Students will review and refine their knowledge of French grammatical structure, including question formation, description, comparison, and present and past narration. An emphasis is placed on written expression.

FRNC 353 Intermediate French Composition 3c-0l-3sh
Prerequisite: FRNC 202
Includes intensive practice in written expression in French. An emphasis is placed on the development of communicative skills as well as knowledge of French structure. Taught in French.

FRNC 354 Business French 3c-0l-3sh
Prerequisite: FRNC 254 or permission of instructor
The study of principles and practices of business communication in French secretarial and administrative procedures with an emphasis on the planning and writing of business letters, reports, and abstracts of articles in business and economics.

FRNC 370 Introduction to French Literature 3c-0l-3sh
Prerequisite: FRNC 341 or 353
Designed to develop students' French reading skills, to provide tools for literary interpretation of texts, and to introduce major literary works of France and the French-speaking world.

FRNC 373 French Civilization 3c-0l-3sh
Prerequisite: FRNC 202
Covers the historical development of French high culture exclusive of literary genres (i.e., prose, poetry, theater). Presents an overview of political and intellectual history, music, art, and architecture. Certain content areas will receive special emphasis at the instructor's discretion.

FRNC 375 French Literature from Medieval through Seventeenth Century 3c-0l-3sh
Prerequisite: FRNC 370
Introduces students to the major developments in French literature and thought from the Medieval through the seventeenth century. Includes an overview of major French literary genres: novel, poetry, and theater. Readings and discussion are in French.

FRNC 376 French Literature from Eighteenth through Twentieth Century 3c-0l-3sh
Prerequisite: FRNC 370
Introduces students to major developments in French literature and thought from the eighteenth century to the present. Includes an overview of major French literary genres: novel, poetry, and theater. Readings and discussion will be in French.

FRNC 390 Teaching Elementary School Content in French and German 3c-0l-3sh
Prerequisite: Permission of the instructor
Students will explore issues relevant to the teaching and learning of French and German in the elementary school (grades K-8). Current theories of child second-language acquisition will be treated. These theoretical foundations will form the basis for the development of objectives and activities that integrate the teaching of foreign language and culture with elementary school subject content. Students will gain practical experience in planning and implementing lessons, assessing student learning, and selecting materials appropriate to the needs and interests of young learners.

FRNC 431 Advanced French Conversation 3c-0l-3sh
Prerequisite: FRNC 331
Builds on the communication skills acquired in FRNC 331. Focuses on the development of advanced vocabulary and discourse strategies. Activities will include in-depth discussion and debate of current events and real-life problems.

FRNC 432 French Phonetics and Phonology 3c-0l-3sh
Prerequisite: FRNC 331 or equivalent
Presents an introduction to the sound system of French and provides training in standard French pronunciation. Basic issues on phonological theory and description will be examined. Students will refine their own pronunciation of French through classroom practice, oral presentations, and tape recordings.

FRNC 441 Advanced French Grammar 3c-0l-3sh
Prerequisite: FRNC 341
Students will build upon their previous knowledge of French grammar, with a view to perfecting their control of more complex structures. These structures include complex sentences, the subjunctive, hypothetical statements, and passive voice. An emphasis is placed on written expression.

FRNC 460 Studies in French Literature 3c-0l-3sh
Prerequisite: FRNC 375 or 376
Provides a flexibly designed syllabus permitting instructors and students to explore areas of special interest in French literature and culture. Content will vary according to the instructor's desired focus for a given semester. Will be conducted in French or English at the instructor's discretion.

FRNC 462 Studies in French Language and Linguistics 3c-0l-3sh
Prerequisite: FRNC 353 or equivalent
Students will explore some topic relevant to French language and linguistics. Possible topics include: French around the world, history of the French language, French applied linguistics. (Total pages read in French for the course should be more than 150.)

FRNC 463 Studies in French Culture and Civilization 3c-0l-3sh
Prerequisite: FRNC 353
Aspects of current French culture and civilization will be explored and assessed particularly in relation to French governmental and cultural institutions.

FRNC 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times.

FRNC 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. An opportunity to engage in an in-depth analysis of some topic dealing with the French language and culture through consultation with a faculty member.

FRNC 493 Internship var-3-12sh
Prerequisite: One semester of study in France
A supervised field experience in France with approved public agencies and institutions or private firms; no longer than one semester and no less than one month. Positions will be matched as closely as possible with the intern's personal interests and professional goals. For more information, contact the director of the Internship Abroad Program.

FSMR Fashion Merchandising

Department of Human Development and Environmental Studies
College of Health and Human Services

FSMR 110 Introduction to Fashion 3c-0l-3sh
A survey of aesthetic, cultural, sociopsychological, and economic factors related to the meaning and use of clothing for the individual and society. (Offered as CS 216 prior to 1996-97)

FSMR 112 Fundamentals of Clothing Construction 1c-3l-3sh
Principles and techniques involved in fundamental clothing construction and fitting are analyzed. Directed laboratory experiences provide an opportunity to solve individual problems in garment structure through the application of principles. (Offered as CS 112 prior to 1996-97)

FSMR 212 Advanced Clothing Construction 1c-3l-3sh
Prerequisite: FSMR 112 or placement (by exam)
Principles of advanced fitting and clothing construction are applied and analyzed. Offered even years, Fall semester. (Offered as CS 212 prior to 1996-97)

FSMR 252 Aesthetics of Fashion 1c-0l-3sh
Prerequisite: Sophomore standing
The study of contemporary apparel design and the relationship of design elements and principles to personal characteristics and social/professional orientation. (Offered as CS 252 prior to 1996-97)

FSMR 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

FSMR 303 Visual Merchandising 1c-3l-3sh
Prerequisite: AR120 or equivalent
Designing and arranging of display and selling areas in relationship to merchandising trends and consumer demands. The emphasis will be on promotion techniques and merchandise sales through effective use of space, design, and color. (Offered as CS 303 prior to 1996-97)

FSMR 314 Textiles 2c-2l-3sh
Prerequisite: CHEM 102 or permission
Analyses of textile components of fiber, yarn, fabrication, finishes, and color with emphasis upon consumer acquisition, use, and satisfaction. (Offered as CS 314 prior to 1996-97)

FSMR 350 Apparel Industry I 3c-0l-3sh
Prerequisites: FSMR 110, completion of 57sh
Introduces the student to the design, production, and distribution of apparel, including primary textile markets; women's, men's, and children's wear; accessories; fashion centers; retailers of fashion; apparel wholesale selling process; fashion store image; and future trends. (Offered as CS 350 prior to 1996-97)

FSMR 357 Global Issues in Textiles and Apparel 3c-0l-3sh
Prerequisite: ECON 121
The study of the global textiles and apparel industry with emphasis on the U.S. textile complex and the U.S. market within an international context.

FSMR 385 Ready-to-Wear Analysis 1c-3l-3sh
Prerequisites: FSMR 112, 350
An examination and evaluation of the quality of ready-to-wear apparel through construction, style, fit, marketability, and price. (Offered as CS 385 prior to 1996-97)

FSMR 433 Study Tour var-1-6sh
Prerequisite: Upper-level standing
Opportunity is provided to visit business establishments and cultural centers concerned with household equipment, furnishings, textiles, clothing, and housing in America as well as abroad. Museums, factories, designers' showrooms, distribution centers, stores, cultural events, and seminars are included. Course may be repeated for a total of 6sh. (Cross-listed as CNSV/INDS 433.)

FSMR 434 Quality Control in Textiles 2c-2l-3sh
Prerequisite: FSMR 314
Physical properties explored through microscopic examination and use of textile testing equipment for fabric analysis. (Offered as CS 434 prior to 1996-97)

FSMR 450 Apparel Industry II 3c-0l-3sh
Prerequisites: FSMR 350 and Liberal Studies math requirements
Introduces the student to the merchandising and promotion of apparel, including organization, buying responsibilities, techniques, and resources; various retail institutions, resident buying offices, apparel dollar planning and control, apparel merchandise assortment planning, apparel buying practices, application of apparel planning and buying, and apparel advertising and promotion. (Offered as CS 450 prior to 1996-97)

FSMR 453 Flat Pattern Design 1c-3l-3sh
Prerequisite: FSMR 112 or 212
Garment design achieved by use of flat pattern techniques. An understanding is developed of the interrelationship of garment design, figure analysis, fabric, fit, and construction processes. Offered even years, Spring semester. (Offered as CS 453 prior to 1996-97)

FSMR 456 Historic Costume 3c-0l-3sh
Chronological study of historic costume from ancient times to the present day with emphasis on the effect of aesthetic, economic, geographic, political, religious, and social factors upon the design of clothing worn. (Offered as CS 456 prior to 1996-97)

FSMR 457 Historic Textiles 3c-0l-3sh
Prerequisite: FSMR 314 or with permission
A study of the development of textiles in prehistoric, ancient, medieval, and modern history with special emphasis on Western European and American textiles.

FSMR 480 Seminar in Fashion Merchandising 3c-0l-3sh
Prerequisite: Senior standing
Knowledge gained in major and additional requirement courses is applied to individual career goals. Students have the opportunity to pursue related areas not directly covered in previous coursework, with emphasis upon independent research, analytical thinking, and communication skills.

FSMR 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

FSMR 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Particular consumer considerations are independently investigated in the area of housing, home equipment, interior design, clothing, and textiles, or in the management of resources. Course may be repeated for a total of 3sh. Students meet with a faculty member at least 5 hours per semester hour.

GEOG Geography

Department of Geography and Regional Planning
College of Humanities and Social Sciences

GEOG 101 Introduction to Geography: Human Environment 3c-0l-3sh
Throughout history, human life and society have been shaped by the physical environment. Today, human activity threatens that environment. The relationship between humans and environment is examined in the context of the surface processes of weather, climate, plate tectonics, population distribution, and soil formation. Topics include agriculture, acid rain, global warming, deforestation, desertification, erosion, volcanism, and pollution.

GEOG 102 Geography of United States and Canada 3c-0l-3sh
The cultural landscape of North America is studied. The relationship between man and environment is examined and spatial patterns of environment, economy, society, and politics are considered.

GEOG 104 Geography of the Non-Western World 3c-0l-3sh
Relates theories of the discipline of geography to problems in the developing world. Emphasizes geographic components of dependency theory, indigenous versus industrial strategies of resource management; world systems theory, spatial legacies of colonialism; and development economics, theories of migration, and urban structure to explore causes, characteristics, and consequences of underdevelopment.

GEOG 213 Cartography I 3c-0l-3sh
Introduces students to principles of thematic map construction. Emphasizes techniques of choropleth mapping and the production of scientific graphs and charts. (Also offered as RGPL 213; may not be taken for duplicate credit)

GEOG 230 Cultural Geography 3c-0l-3sh
An introduction to cultural geography, including population, settlement, historical, urban, and political geography, human relationships with the natural environment, and the literature and methods of cultural geography.

GEOG 231 Economic Geography 3c-0l-3sh
An introduction to geographic concepts, methods, and skills related to spatial patterns of production, consumption, and exchange over the earth's surface.

GEOG 251 Geography of Pennsylvania 3c-0l-3sh
Regions of Pennsylvania are examined in detail to identify man-environment relationships. Soils, topography, climate, vegetation, population, and economic patterns are studied.

GEOG 252 Geography of Latin America 3c-0l-3sh
Impact of rapid population growth and economic development on the environment and spatial organization of Latin America are considered. The resource base and cultural heritage of the region are studied.

GEOG 253 Geography of Europe 3c-0l-3sh
Investigates relationships underlying land use, dominant international problems, boundary disputes, and regional complexes of the European continent.

GEOG 254 Geography of Russia and the Soviet Sphere 3c-0l-3sh
Examines the Russian Republic and the former Soviet empire including the new nations emerging from the U.S.S.R. and former satellite nations. Settlement patterns, economies, cultures, and physical environments are studied. Contemporary topical emphasis is placed on efforts at transformation from communist to market economies and the geo-political status of the new nations.

GEOG 255 Geography of Africa 3c-0l-3sh
Systematic survey of the physical, economic, political-historical, and cultural geography of the continent is followed by regional studies of countries and peoples in Africa, south of the Sahara.

GEOG 256 Geography of East Asia 3c-0l-3sh
Studies China, Japan, Korea, Outer Mongolia, Taiwan. Geographic background for development and wise use and restoration of natural resources are dealt with.

GEOG 257 Geography of South and Southeast Asia 3c-0l-3sh
India, Pakistan, Bangladesh, Sri Lanka, Burma, Thailand, Laos, Cambodia, Vietnam, Malaysia, and Indonesia are studied with special attention to regional similarities and differences, particularly as they pertain to human adjustment.

GEOG 261 Geography of Wine 3c-0l-3sh
The geography of the grape, its production, products, social significance, and consequences of the global wine trade are explored. Students will develop an appreciation for the environmental constraints and characteristics of wines and wine regions. Field trips to visit wineries are an essential element of the course. Verifiable proof of 21 years of age required for voluntary wine tasting activities.

GEOG 281 Special Topics 3c-0l-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students. (May also be offered as RGPL 281; may not be taken as duplicate credit under same title)

GEOG 313 Cartography II 3c-0l-3sh
Prerequisite: GEOG 213
Gives an understanding of the compilation and use of maps and quantitative data. Develops skills essential to the construction of various types of maps. (Also offered as RGPL 313; may not be taken for duplicate credit)

GEOG 314 Map and Photograph Interpretation 3c-0l-3sh
Maps and air photographs, along with remote sensing materials, permit inventory, and analysis of geologic, land use, urban development, and other landscape phenomena. The understanding of these materials and associated tools for their use is presented. (Also offered as RGPL 314; may not be taken for duplicate credit)

GEOG 316 Introduction to Geographic Information Systems 3c-0l-3sh
Prerequisite: GEOG 213, or equivalent, or permission of instructor
Automated methods for creating, maintaining, and analyzing spatial data are presented. Topics include 1) specialized GIS hardware and software, 2) vector vs. raster vs. object-oriented spatial data structures, 3) creation and manipulation of geographic data files, 4) database design and management concepts, 5) spatial analysis, and 6) cartographic design. (Also offered as RGPL 316; may not be taken for duplicate credit)

GEOG 331 Population Geography 3c-0l-3sh
Spatial variations in numbers, characteristics, and dynamics of human population, models, and theoretical constructs relevant to demographic structures and processes are studied, as well as major world and regional problems.

GEOG 332 Urban Geography 3c-0l-3sh
Basic concepts of urban geography including site, situation, function, urban land use, urban structure, and urban hierarchy are introduced. Relationships between urban geography and urban planning are explored. (Also offered as RGPL 332; may not be taken for duplicate credit)

GEOG 333 Trade and Transportation 3c-0l-3sh
Deals with the spatial aspects of transportation systems and their use. Circulation, accessibility, time and distance concepts, and trade patterns are discussed. (Also offered as RGPL 333; may not be taken for duplicate credit)

GEOG 334 Political Geography 3c-0l-3sh
Geographic factors and conditions are analyzed as they relate to the character and function of states. Political institutions are evaluated in light of geographic conditions.

GEOG 335 Geography of Energy 3c-0l-3sh
Covers patterns and problems of energy production and consumption in human societies. Descriptions of what, where, and how much are combined with issues such as technological change, conservation, allocation, environment impacts, and economic development. Specific topics include global history and trends of energy development, pricing systems, types of energy, locations of production areas, and the energy status of the United States.

GEOG 336 Social Geography 3c-0l-3sh
Spatial dimensions of the American society are the focus of this course. The distribution of various social groups and their impact on the landscape are considered.

GEOG 337 Historical Geography 3c-0l-3sh
Studies of past geographies, geographical change through time, and historical perspectives on the cultural landscape are included. Historical geography of the United States is emphasized.

GEOG 341 Climatology 3c-0l-3sh
Examines the elements of weather and climate on Earth. The location and causes of global climatic regions are examined in relation to moving pressure and wind systems. Also considers the climatic history of the planet and recent human modifications of the atmospheric environment.

GEOG 342 Physiography 3c-0l-3sh
Focuses on landform types and their spatial distribution. An emphasis is placed on the tectonic forces that build landforms and the weathering and erosional processes that erode and shape surface features. The relationship between human activities and landforms is also considered.

GEOG 343 Geography of Fresh Water Resources 3c-0l-3sh
Learn about surface and groundwater as a resource with unique properties. Fresh water is defined physically by storage in the hydrologic cycle and the values assigned by different cultures. Problems featured relate to consumptive and withdrawal water uses, the problems of water supply and scarcity, water law and its inconsistencies, flooding and floodplain management, sources of contamination and pollution, wetlands, and case studies of selected river basins. (Offered as GE 340 prior to 1998-99)

GEOG 352 Planning Methods 3c-0l-3sh
Prerequisite: RGPL 350 or permission of instructor
Research, analytical design, and plan-making techniques in urban and regional planning. Examines basic items necessary to prepare urban and regional comprehensive plans. (Also offered as RGPL 352; may not be taken for duplicate credit) (Offered as GE361 Planning: Basic Studies and Analysis prior to 1996-97)

GEOG 371 Aerospace Workshop 3c-0l-3sh
Develops an appreciation and provides information related to aerospace activities and contributions; offers background for teaching aerospace courses; discusses aviation/space careers; and presents the basic principles of flying (usually including some flight instruction). Taught in the Summer only.

GEOG 411 History of Geography 3c-0l-3sh
Prerequisites: GEOG 213, 230, 231, and 341or 342
Course dealing with history of the discipline, great ideas, leading problems, and unresolved issues.

GEOG 412 Research Seminar 3c-0l-3sh
Prerequisite: GEOG 411
This senior seminar and workshop is a capstone course that focuses on recent research in the major field. Students carry out a research project on a topic of local or regional importance. (Also offered as RGPL 412; may not be taken for duplicate credit) (Offered as GE 312 Research in Geography and Planning prior to 1996-97)

GEOG 415 Remote Sensing 3c-0l-3sh
Deals with air photographs, satellite imagery, thermal sensing, and radar imagery and their application to deriving information about the earth's physical and cultural landscapes. (Also offered as RGPL 415; may not be taken for duplicate credit)

GEOG 417 Technical Issues in GIS 3c-0l-3sh
Prerequisite: GEOG 316
A project-based class in which students learn the skills to develop and maintain a Geographic Information System. Through cooperative learning students will design and implement functional systems. Methods for designing GIS systems to user specification, data collection, data input, project management, and system documentation are covered. (Also offered as RGPL 417; may not be taken for duplicate credit)

GEOG 431 Geography of American Indians 3c-0l-3sh
Focuses on the historical/cultural geography of Native Americans. Population, resources, land use, development, settlement patterns, and other selected topics are covered.

GEOG 432 Geography of Crime 3c-0l-3sh
The geographical context of crime is examined from historical and contemporary viewpoints. Relevant concepts and analytical approaches are introduced.

GEOG 440 Conservation: Environmental Analysis 3c-0l-3sh
Problems of exploitation and utilization of regional resources such as soils, minerals, forests, and wildlife are considered in relation to population growth and regional planning and development.

GEOG 464 Land Use Policy 3c-0l-3sh
Introduces students to and provides an overview of land use issues at the regional, state, and federal levels. An emphasis is placed upon the evolution of contemporary policy strategies, constitutional issues, and regional controversies involved in the regulation of metropolitan growth, central city decline, and management of public lands. (Also offered as RGPL 464; may not be taken for duplicate credit)

GEOG 481 Special Topics 3c-0l-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students. (May also be offered as RGPL 481; may not be taken for duplicate credit under same title)

GEOG 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

GEOG 484 Field Studies in Geography and Social Studies var 1-3 sh
Prerequisite: Permission of instructor
Immerses the student in a regional environment. Helps the student to see critically and to interpret a cultural landscape. The experience is predominantly off campus. Using a combination of structured field exercises, culturally specific readings, primary and secondary data, and standard geographic field techniques, the course strives to develop for the student a deeper affective and cognitive understanding of a cultural region. May be repeated under a different study area title.

GEOG 493 Internship var-3-12sh
Professional learning experience with emphasis on application of academic background. Open to majors and minors in geography with a total of 57sh and 15sh in the major. See internship supervisor for additional information.

GEOG 499 Independent Study var-3-6sh
Independent research and study under faculty direction. Interested students should approach department chairperson for information.

GEOS Geoscience

Department of Geoscience
College of Natural Sciences and Mathematics

GEOS 101 The Dynamic Earth 3c-0l-3sh
Prerequisite: No Geoscience majors/minors
Examines the constant changes that affect the rocky surface of our planet. From volcanic eruptions and catastrophic earthquakes to the slow drift of continents and passage of ice ages, earth processes have shaped the history of life and altered the development of human civilization.

GEOS 102 The Dynamic Earth Lab 0c-2l-1sh
Prerequisite: No Geoscience majors/minors
Corequisite: Enrollment in GEOS 101
Introduces students to the techniques geologists use to study the earth and reconstruct its past. Labs cover minerals, rocks, map interpretation, fossil identification. Includes field trips during the scheduled lab period.

GEOS 103 Oceans and Atmospheres 3c-0l-3sh
Prerequisite: No Geoscience majors/minors
The earth's oceans and atmosphere play a crucial role in determining the pace and extent of changes occurring to our global environment. Examines the composition and character of these components and their interaction with other major components of the earth system.

GEOS 104 Oceans and Atmospheres Lab 0c-2l-1sh
Prerequisite: No Geoscience majors/minors
Corequisite: Enrollment in GEOS 103
Introduces students to the techniques oceanographers and meteorologists use to study the earth's oceans and atmospheres and reconstruct their evolution. Labs cover seawater processes, oceanic circulation, marine life, atmospheric structure, and weather.

GEOS 105 Exploring the Universe 3c-0l-3sh
Prerequisite: No Geoscience majors/minors
Examines the history of time, the reasons for the seasons, the characteristics of the planets, moons, stars, and galaxies, and the history and future of space exploration.

GEOS 106 Exploring the Universe Lab 0c-2l-1sh
Prerequisite: No Geoscience majors/minors
Corequisite: Enrollment in GEOS 105
Introduces students to the techniques astronomers use to study the celestial sphere. Constellations, seasons, motions of Sun, Moon, planets, and stars, characteristics of stars and galaxies. Includes two observations which will be held at night.

GEOS 111 Earth Science for Educators I 3c-0l-3sh
Prerequisite: Natural Science/Science Education majors only
An in-depth treatment of introductory oceanography and geology designed specifically for Secondary Science Education majors. Focuses on fundamentals of the earth's physical processes and history and on the ocean's dynamics, chemistry, and tectonics.

GEOS 112 Earth Science for Educators I Lab 0c-3l-1sh
Prerequisite: Natural Science/Science Education majors only
Corequisite: Enrollment in GEOS 111
Lab experiences in various aspects of oceanography and geology, designed to provide concepts and skills for future teaching to Secondary Education majors. Includes field trip(s).

GEOS 113 Earth Science for Educators II 3c-0l-3sh
Prerequisite: Natural Science/Science Education majors only
An in-depth treatment of introductory meteorology and astronomy designed specifically for Secondary Science Education majors. Focuses on atmospheric processes and climate change and on the earth's place in the solar system and universe.

GEOS 114 Earth Science for Educators II Lab 0c-3l-1sh
Prerequisite: Natural Science/Science Education majors only
Corequisite: Enrollment in GEOS 113
Use of the weather station and planetarium highlights a series of exercises designed to aid Secondary Science Education majors in developing concepts and laboratory skills for future teaching.

GEOS 121 Physical Geology 3c-0l-3sh
Corequisite: Enrollment in GEOS 122
A semi-quantitative introduction to the earth sciences, which will include the physical properties of the earth's interior and crust, plate tectonics, surface processes, and the complex geologic interactions that shape and modify our planet. Designed to prepare students for upper-level coursework in geology, physical geography, and anthropology.

GEOS 122 Physical Geology Laboratory 0c-3l-1sh
Corequisite: Enrollment in GEOS 121
Selected problems in rock and mineral identification, topographic and geologic mapping techniques, geologic landforms, and deformation structures. Designed to prepare students for upper-level coursework in geology, physical geography, and anthropology. Includes field trips.

GEOS 123 Applied Mathematics in the Geosciences 1c-0l-1sh
Corequisite: Concurrent enrollment in MATH 121 or MATH 123, or permission of instructor
For Geoscience majors enrolled in either MATH 121 or MATH 123.
Applications of the calculus to problems in geochemistry and geophysics. Topics will involve Geoscience applications of limits, differentiation, Taylor series, exponential functions, integration, and advanced topics.

GEOS 131 Historical Geology 3c-0l-3sh
Prerequisites: GEOS 121 and 122
Corequisite: Enrollment in GEOS 132
An introduction to the history of Earth, including the fossil record and the history of biologic evolution. Topics will also include the growth and tectonic interactions of oceans and continents and the physical evolution of the earth's atmosphere, lithosphere, and hydrosphere. Designed to prepare majors and minors for upper-level geology classes.

GEOS 132 Historical Geology Laboratory 0c-3l-1sh
Prerequisites: GEOS 121-122
Corequisite: Enrollment in GEOS 131
Selected problems in stratigraphic analysis, paleontology, and structural geology; designed to prepare students for upper-level geology classes. Includes field trips.

GEOS 141 Introduction to Ocean Science 3c-0l-3sh
An introduction to physical, chemical, biological, and geological processes in oceanography and the interactions among them. Impact of exploitation of the oceans, coastal areas, marine, physical, and living resources on the environment and on humankind. Includes field trips which may involve a fee and may occur on weekends.

GEOS 150 Geology of National Parks 3c-0l-3sh
A study of geological processes and earth history as documented by the classical geological features of U.S. and Canadian national parks. Includes Badlands, Glacier, Grand Canyon, Great Smokies, Gros Morne, Mammoth Cave, Yellowstone, Yosemite, and others. Not open to Geoscience majors or minors.

GEOS 151 The Age of Dinosaurs 3c-0l-3sh
A thorough introduction to dinosaurs and the world they inhabited. Topics include the most current theories regarding dinosaurian biology (behavior, metabolism, evolution), ecology (greenhouse climate, associated plants and animals), and extinction (asteroid impact, volcanism, climate change). Not open to Geoscience majors and minors.

GEOS 220 Mineralogy 2c-3l-3sh
Prerequisite: GEOS 121
Prerequisite or Corequisites: CHEM 111 or 113, or permission of instructor
An introduction to crystallography, crystal chemistry, optical properties, and mineral associations and phase equilibria. Emphasis is on minerals pertinent to geology, Earth resources, and technology. Laboratory topics emphasize mineral identification in hand specimen, use of the petrographic microscope, and x-ray diffraction techniques. Includes field trips, which may occur on weekends.
(Offered as GEOS 321 prior to 2001-02)

GEOS 221 Physical Resources of the Earth 3c-0l-3sh
An introduction to mineral, energy, and water resources of the earth; genesis of ore depositions; exploration, exploitation, and utilization of resources; impact of exploitation of resources on the environment and on humankind. Includes field trips which may occur on weekends.

GEOS 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

GEOS 310 Environmental Geology 2c-3l-3sh
Prerequisite: 8sh in geology or permission
The application of geologic information to the accommodation and reduction of natural hazards, to land-use planning, and to the utilization of earth materials. Includes field trips which occur on weekends.

GEOS 320 Igneous and Metamorphic Petrology 2c-3l-3sh
Prerequisites: GEOS 131 and 321, or permission of instructor
An introduction to the origin and evolution of igneous and metamorphic rocks based upon a plate tectonic framework. Topics include the evolution of Earth, the Moon, Mars, and other terrestrial planetary objects. Planetary evolution will be examined through analysis of phase equilibria and the physics of magma transport. Laboratory topics emphasize quantitative methods in petrology and the identification and interpretation of rocks and rock textures in hand specimen and thin section. Includes field trips, which may occur on weekends. (Offered as GEOS 322 prior to 2001-02)

GEOS 325 Structural Geology 2c-3l-3sh
Prerequisites: GEOS 131 and 132-133 or permission of instructor
The study of primary structures, contacts, rock mechanics, joints, faults, folds, foliation, and lineation. Includes work with geologic maps and structure sections. Brunton compass, orthographic and stereographic projections. Includes field trips which may occur on weekends.

GEOS 326 Field Geology 2c-3l-3sh
Prerequisite: GEOS 325
Principles and techniques of field geology with emphasis on developing field skills using Brunton compass, aerial photographs, topographic maps, altimeter, Jacob staff, and rock color charts. Field projects involve techniques of field note-taking, measuring and describing stratigraphic sections, geologic field mapping and analysis, construction of geologic maps and structure sections, and report writing. Includes field trips which may occur on weekends.

GEOS 327 Geomorphology 2c-3l-3sh
Prerequisites: GEOS 121, 131
A study of the origin of the earth's land forms, including relationship of geologic structure to landform types and role of geomorphic processes in landscape development.

GEOS 330 Paleontology 2c-3l-3sh
Prerequisite: GEOS 131 or permission of instructor
The study of the morphology, evolution, geologic significance, and paleoecology of fossil organisms. Includes field trips which may occur on weekends.

GEOS 331 Hydrogeology 2c-3l-3sh
Prerequisites: MATH 121-122, GEOS 121-122/123, or permission
An overview of groundwater geology, including flow equations, graphical solutions to flow problems, and computer modeling of flow systems, as well as the geotechnical and social implications of groundwater utilization. Includes field trips which occur on weekends.

GEOS 332 Geochemistry 2c-3l-3sh
Prerequisites: CHEM 111-112, GEOS 121-122/123, or permission
An introduction to low-temperature chemistry of the earth's surface and near-surface; includes discussions of chemical activity, solution chemistry, organic geochemistry, trace elements, isotopes, and the chemistry of natural waters.

GEOS 336 Geology of the Northern Rockies var-3sh
Prerequisite: Permission of instructor required; at least 14sh of GEOS courses recommended
A field study of the major geologic features and relationships involved in the development of the northern Rocky Mountains. National Park and Monument areas of South Dakota, Wyoming, and Montana are included among the areas investigated. (Three weeks, taught in the Summer only)

GEOS 337 Geology of Newfoundland var-3sh
Prerequisite: Permission of instructor required; at least 14sh of GEOS courses recommended
A field course designed to utilize the exceptional and diverse geologic features of Newfoundland for instruction of departmental majors and minors in tectonic analysis utilizing sedimentologic, stratigraphic, and paleontologic observations. (Three weeks, taught in the Summer only)

GEOS 338 Geology of the American Southwest var-3sh
Prerequisite: Permission of instructor required; at least 14sh of GEOS courses recommended
A field study of the major geologic features and relationships exposed in the American Southwest, including the Colorado Plateau, the Rio Grande Rift, Death Valley, and parts of the Southern Rocky Mountains. (Three weeks, taught in the Summer only)

GEOS 341 Solar System 2c-3l-3sh
Prerequisites: MATH 121 and PHYS 111
Fundamentals of astronomy, with emphasis on observational methods, mechanics, and origin of the solar system and spatial relationship of the solar system to the other members of the universe.

GEOS 342 Stellar Astronomy 2c-3l-3sh
Prerequisites: MATH 121 and PHYS 111
Fundamentals of astronomy, with emphasis on sun, stars, galaxies, the sidereal universe, and use of spectroscopy for gathering astronomical data.

GEOS 350 Operation of the Planetarium var-1sh
Prerequisites: GEOS 110, 341, 342, or permission of instructor
Designed to acquaint the student with methods of operation and repair of a Spitz A-3-P planetarium. Content includes topics suitable for lectures to various age groups. Student will write and present a demonstration program. Meets once a week with occasional evening observations.

GEOS 361 Physical Oceanography 2c-3l-3sh
Prerequisites: PHYS 111 and MATH 121 or permission of instructor
An introduction to physical, chemical, geological, and biological nature of ocean: topography, submarine geology, and bottom deposits. Includes field trip(s) which may occur on weekend(s).

GEOS 362 Plate Tectonics 2c-3l-3sh
Prerequisites: PHYS 111-112 and a minimum of 20sh of geology
An introduction to formal theory of plate tectonics. Topics include magnetic anomalies, first motion studies, thermal structures of the plates, kinematics, crustal generation, sea floor spreading, collision, and subduction deformation.

GEOS 371 Meteorology I 2c-3l-3sh
Prerequisite: One year of physical science or physics
An introduction to meteorological sciences: composition and structure of the atmosphere; radiation principles; elementary thermodynamics and heat balance.

GEOS 380 Research Methods in the Geosciences 2c-0l-2sh
Prerequisites: 75sh or permission of instructor
For students enrolled in all majors within the Geoscience Department. Students will learn the methods of research in the geosciences by working on a project of their choosing. Students will define a problem, propose several hypotheses, collect data, and perform a quantitative analysis to test their hypotheses and propose a solution. Final results will be submitted in professional manuscript form. As preparation, students will examine various geoscience problems and data sets through the semester. Cannot be taken subsequent to GEOS 480.

GEOS 411 Sedimentary Petrology 2c-3l-3sh
Prerequisite: GEOS 321 or permission of instructor
The study of sediments and sedimentary rocks with emphasis on interpreting ancient environments of deposition utilizing sieve analysis, hand lens, and petrographic microscope. Includes field trips which may occur on weekends.

GEOS 412 Stratigraphy 2c-3l-3sh
Prerequisite: GEOS 411 or permission of instructor
Principles and processes involved in development and description of stratified rock sequences, principles and problems of correlation, and selected stratigraphic problems. Includes field trips which may occur on weekends.

GEOS 440 Subsurface Geology 2c-3l-3sh
Prerequisite: Minimum 20sh of geology
An introduction to the geology of petroleum, its origin, migration, entrapment, and production. Lab is designed to provide practical experience in subsurface mapping techniques and the use and evaluation of geophysical logging devices. Includes field trips which may occur on weekends.

GEOS 441 Carbonate Geology–Florida var-3sh
Prerequisite: 17sh geology courses or written permission of instructor
Two to three weeks of field study in Florida Keys. Course will be conducted from base camp in Florida Keys and will consist of both land and water work as the different carbonate environments in the Keys, Florida Bay, and the Atlantic reef tract are studied.

GEOS 480 Geoscience Seminar var-1sh
Prerequisites: GEOS 380, senior standing
For seniors majoring in some aspect of geoscience. The seminar (1) provides the student with an opportunity to prepare, formally present, and defend a scientific paper based either on his/her own research or on a topic chosen with the approval of instructor and (2) provides opportunity to discuss topics presented by other students, faculty, or guests.

GEOS 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
It is the department's intention to use this course to schedule extended field trips and for teaching special courses which will utilize the specialties of the Geoscience faculty.

GEOS 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Independent study provides the student with an opportunity to use library, laboratory, or field research in an area which is of interest under the supervision of a designated faculty member. Approval is based on academic appropriateness and availability of resources.

GEOS 493 Geoscience Internship var-1-12sh
Summer or semester work experience with cooperating firms or agencies. May be scheduled only after consultation with advisor and chairperson. Requirements include up to three on-site consultations, depending on credit hours and location's site; completion of up to three oral progress reports; and submission of a detailed work diary. Restricted to junior and senior department majors; only 3sh may be applied toward major.

GERN Gerontology

Department of Nursing and Allied Health Professions
College of Health and Human Services

GERN 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

GERN 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

GERN 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

GERN 493 Internship 3sh
Prerequisites: Senior standing, all required courses
Supervised experience in public or private agency that serves aging clients.

GREK Greek

Department of Spanish and Classical Languages
College of Humanities and Social Sciences

GREK 151 Greek I 3c-0l-3sh
For beginning students; pronunciation, reading, oral, and written communication are the objectives. In grammar the case system of the Greek noun is begun. All classical Greek courses are offered occasionally through Independent Study; Modern Greek may be available through the Critical Languages program. Offered only by individualized instruction.

GREK 152 Greek II 3c-0l-3sh
A continuation of Greek I. In grammar the case system of the Greek noun is completed. Offered only by individualized instruction.

GREK 251 Greek III 3c-0l-3sh
Continued training in basic skills, with the possible addition of the study of specific topics; consult the department for topics of interest. In grammar most tenses of the Greek verb are studied. Offered only by individualized instruction.

GREK 252 Greek IV 3c-0l-3sh
A continuation of Greek III. In grammar more tenses of the verb are studied. The readings become short selections from Greek literature. Offered only by individualized instruction.

GREK 351 Advanced Greek Language I 3c-0l-3sh
Reviews grammar in depth; analyzes the structure of the language. While themes are not required, selections from Greek prose are read both for knowledge of their content and for developing knowledge of the structure of the language. Offered only by individualized instruction.

GREK 352 Advanced Greek Language II 3c-0l-3sh
A continuation of GREK 351. Selections are from poetry this semester. Offered only by individualized instruction.

GREK 482 Independent Study var-3sh
An opportunity to engage in an in-depth analysis of some topics dealing with the Greek language and culture through consultation with a faculty member. Permission required.

GRMN German

Department of French and German
College of Humanities and Social Sciences

GRMN 101 Elementary German var-6sh
Students complete levels I and II sequence in one semester (6sh). The emphasis will be on mastery of spoken language as well as basic language skills. Classes meet M,W,F for 60 minutes and T,R for 90 minutes.

GRMN 151 German I 3c-0l-3sh
For beginners, the objectives include grammar, pronunciation, reading, speaking, and writing.

GRMN 152 German II 3c-0l-3sh
For students who have had German I or its equivalent, the objectives are to enhance and develop the four skills of listening, speaking, reading, and writing.

GRMN 201 Intermediate German var-6sh
Students complete levels III and IV sequence in one semester (6sh). Students develop language skills with emphasis on oral competency. Classes meet M,W,F for 60 minutes and T,R for 90 minutes.

GRMN 221 Conversation III 2c-0l-2sh
Two-hours-weekly conversation practice in small groups emphasizing the use of greetings, idiomatic expressions, and communication skills to improve vocabulary and pronunciation.

GRMN 222 Conversation IV 2c-0l-2sh
Two hours of weekly conversation designed as a continuation of the practice in small groups, focusing on speaking and listening skills and on participation in discussions and dialogues. May enroll without having taken GRMN 221.

GRMN 251 German III 3c-0l-3sh
Continued training in basic skills, with the possible addition of the study of specific topics; consult the department for topics of interest.

GRMN 252 German IV 3c-0l-3sh
A continuation of German III with some emphasis on literary works.

GRMN 253 Intermediate Composition and Conversation 3c-0l-3sh
Can be taken instead of or in addition to 252. Designed for majors or serious students. Taught Spring semester only.

GRMN 254 Business German 3c-0l-3sh
Prerequisite: GRMN 251 or equivalent
A one-semester course which can be taken instead of, or in addition to, GRMN 252 by students interested in business or as part of the Liberal Studies requirement (equivalent to German IV). Business practices and specialized business vocabulary, letter writing, and problems of translation are emphasized.

GRMN 256 Scientific German 3c-0l-3sh
Designed to substitute for GRMN 252, course will be offered in the second semester. Primarily for science majors; it may be taken as an elective by German majors.

GRMN 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

GRMN 321-322 Advanced Conversation I and II each 2c-0l-1sh
Designed to increase speaking ability. The variety of content permits repetitions of these relatively informal courses.

GRMN 351 Advanced German Language I 3c-0l-3sh
Aims to review and expand the student's grammatical skills, to apply these skills to extensive cultural and short literary readings, and to produce frequent themes on these readings.

GRMN 352 Advanced German Language II 3c-0l-3sh
Continues to expand the student's grammatical skills and to apply them by the writing of longer themes based on cultural and literary readings.

GRMN 361 Development of German Culture and Literature I 3c-0l-3sh
Designed to provide a background in German literature, music, art, architecture, and history. Surveys the period from the migrations of the Germanic tribes to the rise of Prussia as a European power.

GRMN 362 Development of German Culture and Literature II 3c-0l-3sh
A continuation of GRMN 361. Covers the period from the French Revolution and its effects on Germany up to the present, with an emphasis on German literature, history, and music.

GRMN 363 Introduction to German Literature I 3c-0l-3sh
Selected readings in German poetry to acquaint the student with formal and thematic aspects of German verse from the Middle Ages to the present.

GRMN 364 Introduction to German Literature II 3c-0l-3sh
Selected readings in German fiction and drama to acquaint the student with representative works and techniques of interpretation.

GRMN 367 Nineteenth-Century German Literature 3c-0l-3sh
A survey of the major works of German poetry and prose with an emphasis on the literary movements of Romanticism, Realism, and Naturalism.

GRMN 368 Twentieth-Century German Literature 3c-0l-3sh
A study of representative works of German poetry and prose from Expressionism through World War II.

GRMN 369 Contemporary German Literature 3c-0l-3sh
A study of the literary achievement of postwar Germany up to the present.

GRMN 370 The Age of Goethe I 3c-0l-3sh
A study of representative works from the Enlightenment and Storm and Stress periods.

GRMN 371 The Age of Goethe II 3c-0l-3sh
A study of selected works of German Classicism with an emphasis on the prose and poetry of the first decades of the nineteenth century.

GRMN 381 German Drama in English Translation 3c-0l-3sh
Representative works of major dramatists in English translation. Primarily intended for students of English literature and comparative literature and not considered as credit toward a German major.

GRMN 390 Teaching Elementary School Content in French and German 3c-0l-3sh
Prerequisite: Permission of the instructor
Students will explore issues relevant to the teaching and learning of French and German in the elementary school (grades K-8). Current theories of child second-language acquisition will be treated. These theoretical foundations will form the basis for the development of objectives and activities that integrate the teaching of foreign language and culture with elementary school subject content. Students will gain practical experience in planning and implementing lessons, assessing student learning, and selecting materials appropriate to the needs and interests of young learners.

GRMN 410 History of the German Language 3c-0l-3sh
History and development of German language, with special emphasis on relationships with English. Analysis of annals in Gothic, Old High German, and Middle High German using methods of historical and contemporary linguistics.

GRMN 481 Special Topic var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students. Designed to meet the special needs of a student group.

GRMN 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
An opportunity to engage in an in-depth analysis of some topic dealing with the German language and culture through consultation with a faculty member.

GRMN 493 Internship in Germany var-3-12sh
Prerequisites: 12sh in 300- or 400-level courses and a minimum of one semester study in Germany
A supervised field experience in Germany with approved public agencies and institutions or private firms; no longer than one semester and no less than one month. Positions will be matched as closely as possible with the intern's personal interests and degree of proficiency in the German language. Academic work at the Gesamthochschule in Duisburg must precede the internship. Open to students in other disciplines, such as Political Science, International Relations, Business, etc., with advisor approval.

HIST History

Department of History
College of Humanities and Social Sciences

HIST 195 The Modern Era 3c-0l-3sh
Interprets the development of two centers of civilization, Europe and America, within a global context and extends from at least the Age of Enlightenment through the present. (History majors should substitute HIST 202 for HIST 195 to meet the Liberal Studies humanities requirements.)

HIST 200 Introduction to History 3c-0l-3sh
For History majors and concentrates. Topics include philosophy of history, important schools of history and historians, and methods of historical research. Student is encouraged to become a better historian and to identify with historical profession. For History majors only.

HIST 201 Western Civilization Before 1600 3c-0l-3sh
A survey course presenting in various forms the origin and development of major political, social, religious, and intellectual institutions in Western Civilization to approximately 1600. For History majors or by instructor's permission.

HIST 202 Western Civilization Since 1600 3c-0l-3sh
Development of Western civilization from the expansion of Europe to the present, including political, diplomatic, economic, social, and cultural areas. Introduces issues and interpretations encountered in upper-level courses. For History majors or by instructor's permission.

HIST 203 United States History for Historians 3c-0l-3sh
Introduces aspiring historians to United States history since 1763. Emphasizes the issues, methods, and problems that currently concern professional historians. For History majors or by instructor's permission.

HIST 210 Ancient Civilization: The Middle East and the Eastern Mediterranean 3c-0l-3sh
Note: Not open to History and Secondary Social Science Education majors
An examination of the development and the spread of ancient civilization in ancient Middle East and the Eastern Mediterranean. Topics of study will include the characteristics of civilization and the development of political, social, economic, and cultural institutions in the river valley centers and the diffusion to the fringe areas.

HIST 212 Ancient and Medieval Europe 3c-0l-3sh
Note: Not open to History and Secondary Social Science Education majors
An examination of the development of civilization in Europe during the ancient and medieval periods. Focuses on the Ancient Greek and Roman civilizations and the medieval European civilization. The characteristics and institutions of civilization will be stressed as well as the political history.

HIST 214 Themes in American History 3c-0l-3sh
Prerequisite: HIST 195
Open only to non-History majors. Designed to give students an appreciation of the basic themes and issues in the making of American society. Students will examine themes such as the fruition of democracy, the American dream, slavery and freedom, the tensions between liberty and order, and the role of the United States in a world setting.

HIST 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

HIST 301 History of Ancient Greece 3c-0l-3sh
Analyzes major political, social, and economic developments in ancient Greek civilization from Bronze Age to death of Alexander.

HIST 302 History of Ancient Rome 3c-0l-3sh
Traces Roman history from early Republic down to fall of Empire. Roman political theory will be particularly emphasized.

HIST 303 Medieval Europe I, 400-1000 3c-0l-3sh
History of early Medieval Europe, from decline of Rome to beginnings of High Middle Ages; emphasis on political, social, economic, religious, and intellectual developments.

HIST 304 Medieval Europe II, 1000-1300 3c-0l-3sh
History of late Medieval Europe, from High Middle Ages to Renaissance period; emphasis on political, social, economic, religious, and intellectual developments.

HIST 305 Renaissance and Reformation 3c-0l-3sh
History of Europe from c. 1250; rise of commercial city, kings, and pressures on Christian Church to 1600. Some consideration of technology and voyages.

HIST 306 Early Modern Europe 3c-0l-3sh
Greatness of France under Louis XIV; Sweden; Thirty Years' War. Emergence of modern society; French Revolution.

HIST 307 History of Europe: 1815-1914 3c-0l-3sh
The study of Europe in nineteenth century, with emphasis on the emergence of major thought patterns, Romanticism, Nationalism, Socialism, and Positivism.

HIST 308 Twentieth-Century Europe 3c-0l-3sh
Political, economic, and diplomatic trends in Europe since 1900, with major emphasis on causes and results of war and search for security.

HIST 311 Rise and Fall of Hitler's Empire 3c-0l-3sh
In-depth study of Hitler and the Nazi order; offers an analysis of nineteenth-century origins of Nazi ideology and intensively analyzes domestic and foreign totalitarian policy (1920-1945), including Holocaust, Resistance, and the postwar Nuremberg Trials.

HIST 320 History of England to 1688 3c-0l-3sh
A survey of the growth of the English nation, with emphasis on political, social, and economic developments leading to seventeenth-century conflict between Crown and Parliament.

HIST 321 History of England, 1688 to Present 3c-0l-3sh
A survey of the growth of England as a democratic constitutional monarchy. Attention directed to industrial revolution and to imperial expansion and England's role in twentieth-century world. Attention given to social and cultural history.

HIST 322 French Revolution and Napoleon 3c-0l-3sh
Brief sketch of Old Regime, concentration on Revolution and Empire, with emphasis on politics, social structure, diplomacy, and economics.

HIST 324 History of Germany to 1848 3c-0l-3sh
The study of the development of Germany politically and culturally from ancient times, emphasizing medieval and early modern periods to 1849.

HIST 325 History of Germany: 1849 to the Present 3c-0l-3sh
The study of the political and cultural development of modern Germany from the Revolution of 1848, including imperial, republican, and totalitarian phases, to post-World War II East and West Germany.

HIST 326 History of Russia 3c-0l-3sh
General survey of Russian history, culture, and institutions. Special consideration given to study of historical forces formative of Revolution of 1917.

HIST 327 Soviet Union and Contemporary Russia 3c-0l-3sh
Prerequisites: Sophomore standing, completion of HIST 195 (nonmajors)
Analyzes the period from 1855 to the present, including the attempts at modernization by Imperial Russia, the creation of the Soviet Union and further modernization, and the collapse of the Soviet Union.

HIST 330 History of the Islamic Civilization 3c-0l-3sh
An approach to learning about a non-Western culture: Muhammad, Arabs, and Muslims as creators of a great civilization from rise of Islam to 1800; emphasis on cultural institutions of Islam and their interrelationships within Middle East.

HIST 331 Modern Middle East 3c-0l-3sh
A survey of changes that have taken place in Middle East and in Islam since eighteenth century and of contemporary problems in that region.

HIST 335 History of East Asia 3c-0l-3sh
History of China and Japan from ancient times, Buddhism, medieval Japan, Chinese communism, industrialization. Some consideration of peripheral Asia from 1500.

HIST 340 Colonial America 3c-0l-3sh
A survey of original thirteen states from their inception as colonies within the British empire to 1763, the eve of Independence. Attention is given to their political development; economic position within the empire; relations with Indians; and evolution of social, educational, and religious life.

HIST 341 American Revolution 3c-0l-3sh
An examination of Whig-Tory participants of American Revolution. Examines events from 1763 to 1783. Changing interpretations of the causes and effects of the revolution will be discussed.

HIST 342 The Early Republic 3c-0l-3sh
A survey of United States history from 1783 to 1850, with special attention on constitutional, political, economic, and social trends.

HIST 343 Civil War and Reconstruction 3c-0l-3sh
The study of the failure of American democracy to cope with issues of mid-nineteenth century, followed by political, economic, military, and social developments during war and reconciliation of North and South.

HIST 350 History of Latin America Colonial Period, 1450-1820 3c-0l-3sh
A study of life of people, Indian cultures, conquest by Spaniards and Portuguese, government during Colonial Period, and Wars of Independence.

HIST 351 History of Latin America: National Period, 1820-Present 3c-0l-3sh
A study of the history of nations which have emerged since independence; emphasis on economic, political, cultural, and social developments of these nations, as well as relationships of these nations to others in the hemisphere.

HIST 355 African History I: Antiquity to 1600 3c-0l-3sh
Prerequisites: Sophomore standing, completion of HIST 195 (nonmajors)
A survey of the sociocultural, political, and economic life of precolonial African societies. Focus is on ancient kingdoms and cultures, precolonial states, internal and Atlantic trade networks.

HIST 356 African History II: 1600 to Present 3c-0l-3sh
Prerequisites: Sophomore standing, completion of HIST 195 (nonmajors)
A survey of African sociocultural, political, and economic developments during the colonial and modern periods. Course covers imperialism, the struggle for control for Africa, the two global wars and their repercussions for Africa, decolonization, and modern African states.

HIST 360 History of Pennsylvania 3c-0l-3sh
Emphasizes the cultural, economic, political, and social development of our state in its various periods from colonial to today. Special attention given to diversity of Pennsylvania's people, their institutions and problems.

HIST 361 History of American Diplomacy, 1775-1900 3c-0l-3sh
Traces foreign relations of the United States from Independence to emergence as a world power. Topics concentrate on themes of commercial relations, political isolation, expansion, and debate over imperialism.

HIST 362 History of American Diplomacy, 1900-present 3c-0l-3sh
Treats primarily our twentieth-century involvement in world affairs and domestic debate over that involvement. Special emphasis will be placed on the role of interest groups and increasing power of Executive Department over foreign affairs.

HIST 363 Thought and Culture in Early America 3c-0l-3sh
Selected topics in early American intellectual and cultural growth, with emphasis on Puritanism, Enlightenment, cultural nationalism, and Romantic movement.

HIST 364 Thought and Culture in Modern America 3c-0l-3sh
Selected treatment of historical development of modern American movements in social and political thought, religion, philosophy, fine arts, and literature.

HIST 365 History of Black America Since Emancipation 3c-0l-3sh
Description and analysis of the role of blacks in the history of the United States since the Civil War; emphasis on key leaders, major organizations, leading movements, and crucial ideologies of blacks in modern America.

HIST 366 African-American Women 3c-0l-3sh
Major economic, social, and political issues which have affected black women since their introduction into North America to the present.

HIST 367 Native American History 3c-0l-3sh
An unfamiliar perspective on a familiar tale. Presents the "new Indian History"—North America from Native American materials and points of view. Identification, analysis, and synthesis of Indian realities and options over time are at the heart of this course.

HIST 369 Women in America 3c-0l-3sh
A study of the activities of women from the colonial era to the modern era evaluating cultural, societal, religious, economic, and political frameworks. Reviews women's involvement in movements for feminism, social reform, unionism, and the abolition of slavery.

HIST 370 Religion in America 3c-0l-3sh
A history of religious belief and practice in the United States from the colonial period to the present, with an emphasis on the last one hundred years.

HIST 372 History of the Early American Working Class 3c-0l-3sh
Description and analysis of the nature and significance of the working class of the United States in the eighteenth and nineteenth centuries. The work settings and communities of workers will be examined as well as unions such as the National Labor Union and the Knights of Labor.

HIST 373 History of the Modern American Working Class 3c-0l-3sh
Description and analysis of the nature and significance of the working class of the United States in the twentieth century. Work settings and strikes will be examined and analyzed as well as unions such as the United Mine Workers and the United Auto Workers and labor leaders including Samuel Gompers, John L. Lewis, and George Meany.

HIST 374 History of Organized Crime 3c-0l-3sh
Studies the relationship between urban, entrepreneurial crime and the evolution of industrial America.

HIST 390 History of Women—World Cultures 3c-0l-3sh
Explores religious, legal, political, economic, and mythic dimensions of women in society from ancient to modern times, including Western and non-Western experiences.

HIST 391 Film as History 3c-0l-3sh
Particularly concerned with probing the relationship between cinema and society. History of film is explored and student is given some background in film interpretation and cinematography, the western, science fiction, police films, and great foreign and American detective films.

HIST 480 Senior Seminar 3c-0l-3sh
A regimen of research resulting in a written paper. Students work on a program selected by the instructor. For History majors or by instructor's permission.

HIST 481 Special Studies in History var-1-3sh
Prerequisite: As appropriate to course content
Each semester, courses are offered in interest areas that are not part of the regular program. Some examples of courses of this type are the Victorian Age, the History of Love, World War II, the Great Depression, the Adams Chronicles, and the History of New York City. Students may schedule as many of these courses as desired, but two per semester is the usual limit.

HIST 482 Independent Study var-3-6sh
Prerequisites: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office with 12sh in history; a 3.0 GPA in history classes; permission of a faculty member. Approval is based on academic appropriateness and availability of resources
Involves directed reading or research for qualified students. Experimental projects and personalized learning are encouraged.

HIST 483 Independent Study 3c-0l-3sh
An honors program within the independent study format. Minimum qualifications are a 3.0 GPA, 15sh of history, and a 3.2 GPA in history classes. Satisfactory honors work is rewarded by formal recognition at graduation.

HIST 487 Honors Colloquium in History 3c-0l-3sh
Colloquium emphasizing reading, discussion, and writing on an announced historical topic or theme which will vary from semester to semester according to the expertise of the faculty member teaching the course. Open to all Honors College students who have completed HNRC 201 and, with instructor permission, to junior and senior History, History/Pre-law, and Social Science Education majors who have at least a 3.5 GPA in history classes.

HIST 493 Internship var-3-12sh
With departmental approval, students are attached to local or national government or private agencies doing directive, bibliographical, archival, or museum work. Advising professor meets with intern regularly and determines what papers or reports will be required.

HMEC Child Development/Family Relations

Department of Human Development and Environmental Studies
College of Health and Human Services

HMEC 218 Child Development 3c-0l-3sh
Prerequisite: PSYC 101
Focuses on the normal development and behavior of children. A survey made of physical, emotional, social, and intellectual development of children from conception through early adolescence. Pertinent child development research analyzed.

HMEC 220 Teaching in Child Development Centers 2c-4l-4sh
Prerequisite: HMEC 218 or equivalent
Techniques in planning for and teaching preschool children. Participation as teacher-assistant provides experience in applying principles of child guidance and development needed by teachers in preschool centers or secondary school child development laboratories.

HMEC 224 Marriage and Family Relations 3c-0l-3sh
Prerequisite: PSYC 101
Focuses on principles of human relations basic to marital decisions and adjustment. Influence of community and family experiences on personal development and adjustment explored.

HMEC 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

HMEC 317 Infant Development 2c-2l-3sh
Prerequisite: HMEC 218
A study of characteristic developmental changes of human infants from birth to approximately two and a half years. Participation as teacher assistant in infant/toddler child care center provides experience in developmentally appropriate guidance and planning for very young children.

HMEC 321 Preschool Education 3c-0l-3sh
Prerequisite: HMEC 220 or concurrently
Examination of the child development philosophy as the basis for developmentally appropriate decisions and methods in preschool education programming. The emphasis is placed on play as a developmental process and as the major aspect of the preschool curriculum. May not be interchanged with ELED 353.

HMEC 324 Family Dynamics 3c-0l-3sh
Prerequisite: HMEC 224 or equivalent
The emphasis will be on processes and models of family development topics. Focus on approaches and dynamics of principles related to familial and marital adjustment and coping.

HMEC 418 Advanced Child Development 3c-0l-3sh
Prerequisite: HMEC 218
A study of trends and research in the field of child development based on a review of major theorists and current literature.

HMEC 422 Early Childhood Education 3c-0l-3sh
Prerequisite: HMEC 220 or concurrently
Current educational theories and research reviewed in terms of implication for preschool and their effect on material, equipment, and activity selection.

HMEC 424 Family Issues 3c-0l-3sh
Prerequisite: HMEC 224
Concentrated study of selected areas of family life, with emphasis on current personal and social issues affecting the family.

HMEC 426 Techniques of Parent Education 3c-0l-3sh
Prerequisite: HMEC 220 or equivalent
Examination of nature, extent, and significance of parent education. Interrelationships of home, school, and community agencies are examined in light of various programs, methods, and techniques of parenting education.

HMEC 427 Administration of Child Development Centers 3c-0l-3sh
Prerequisites: HMEC 220 or equivalent, juniors or seniors only
Development of special knowledge and competencies needed by successful administrators of child care programs including proposal writing, budgeting, management, staff selection and training, appropriate curriculum materials, philosophy, parent involvement, child advocacy, and program evaluation.

HMEC 463 Family and the Community 3c-0l-3sh
A study of community agencies and problems that affect families and their contributions to community. Investigation of ways group dynamics, communication media, and other resources aid understanding of human behaviors. Field experience is an integral part of the course.

HMEC 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

HMEC 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Upper-level students with high scholastic achievement pursue their particular interests outside the realm of the organized home economics education curriculum. May be taken more than once to a maximum of 3sh. Approval is based on academic appropriateness and availability of resources.

HMEC 493 Internship var-6-12sh
Prerequisites: Permission of department, college dean, and university internship coordinator; upper-level standing
Practical experience related to the student's major area of study. Objectives are developed individually in consultation with university faculty member who supervises the internship. Log and major paper required. May be repeated up to a total of 12sh; however, these semester hours are not applicable toward the 124sh required for graduation if student receives 12sh in student teaching.

HNRC Honors College

Robert E. Cook Honors College
Academic Affairs Division

HNRC 101 Honors Core I 5c-0l-5sh
Prerequisites: Freshman standing, admission to the Honors College
This first in a series of three required and interrelated courses introduces Honors College students to major works of literature and art; to major ideas in history, philosophy, religious studies, literature, and the fine arts; and to critical thinking skills used in reading, writing, and discussion in an integrated, synthetic, and interactive pedagogical environment. While materials from various periods and disciplines are part of HNRC 101, each instructor has attempted to incorporate some works from a common century to provide students with a common ground for exploring the core questions.

HNRC 102 Honors Core II 5c-0l-5sh
Prerequisites: HNRC 101, freshman standing, and admission to Honors College
The second in a series of three required and interrelated courses. HNRC 102 continues the emphases of HNRC 101: (a) introduction to major works of literature and fine arts; (b) introduction to major ideas in history, philosophy, religious studies; and (c) focus on critical thinking skills used in reading, writing, and discussion in an interrelated, synthetic, and interactive pedagogical environment. Although materials come from various periods and disciplines, each instructor has incorporated works from a common century to provide a common ground for exploring core questions. Building on their experiences in HNRC 101, students will become more critical and analytical in their reading and response. Further, the ability to synthesize will be emphasized based on their previous readings and learning experiences.

HNRC 201 Honors Core III 4c-0l-4sh
Prerequisites: Sophomore standing, admission to the Honors College, and successful completion of HNRC 101 and 102 if admitted to Honors College as a first-year student. Prerequisites for students admitted to the Honors College as sophomores are ENGL 101 and at least one Liberal Studies course in the humanities or fine arts.
Completes the introduction of Honors College students to major works of literature and art; to major ideas in history, philosophy, religious studies, literature, and the fine arts; and to critical thinking skills used in reading, writing, and discussion in an integrated and interactive pedagogical environment.

HNRC 483 Honors Thesis var-1-6sh
Prerequisites: Honors College student in good standing; at least junior status at time topic is proposed. Prior approval through advisor, faculty members, department chairperson, dean, and Provost's Office
An intensive, focused study involving independent research within the student's major discipline culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6sh. Approval is based on academic appropriateness and availability of resources.

HPED Health and Physical Education

Department of Health and Physical Education
College of Health and Human Services

HPED 117 Fitness-Swimming 0c-2l-1sh
Fundamentals and techniques of swimming and fitness.

HPED 124 Fitness Through Dance 0c-2l-1sh
A physical fitness development course for men and women that employs a combination of exercises and dance techniques performed to music.

HPED 128 Golf 0c-2l-1sh
Fundamentals and techniques of golf.

HPED 142 Foundations of Health, Physical Education, and Sport 3c-0l-3sh
Historical, philosophical, and psychosocial foundations of health and physical education are introduced. Specific emphasis is given to scientific theories and principles in such areas as health promotion and behavioral change, exercise physiology, motor development, kinesiology, and motor learning.

HPED 143 Health and Wellness 3c-0l-3sh
Introduces the student to the major components of wellness: contemporary nutrition issues as they relate to personal food choices, physical fitness, stress management, sexually transmitted diseases, AIDS, and substance abuse. Completion of HPED 143 fulfills the Liberal Studies Health and Wellness requirement.

HPED 145 Tennis 0c-2l-1sh
Fundamentals and techniques of tennis.

HPED 162 Scuba Diving 0c-2l-1sh
Designed to teach necessary skills and proper use of equipment for underwater swimming. Tanks, regulators, weights, and special equipment furnished. Student must purchase a mask, fins, and snorkel (approximately $15). Includes theory as well as practical work.

HPED 165 Lifeguarding 0c-2l-1sh
Prerequisites: Departmental consent and Advanced Swimmer
Designed for professional lifeguards. Includes lifeguarding techniques for pools and fresh and saltwater beaches. Red Cross certification (Pittsburgh Division) granted upon satisfactory completion of course requirements.

HPED 166 Basic Smallcraft 0c-2l-1sh
Prerequisite: Intermediate swimming ability
Designed to introduce the use of the canoe, paddle board, and sailboat. An emphasis is placed on the development of boating skills, safety rescue, and survival procedures. Red Cross smallcraft certification is granted upon successful completion of the course.

HPED 175 Prevention and Care of Injuries to the Physically Active 2c-0l-2sh
General information will be presented related to the prevention, recognition, and care of both acute and chronic injuries common to participants of physical activity, fitness, and athletics. Specific topics to be addressed include prevention techniques, the classification and staging of injury conditions, and basic evaluation techniques, as well as emergency management and follow-up care procedures.

HPED 200 Fundamentals of Physical Activity 1c-2l-1sh
A foundation course designed for the purpose of training in the analysis and performance of the fundamental skills for subsequent motor behavior as they relate to games, sports, and dance. The opportunity to refine powers of observation through principles of efficient and effective movement fundamentals is provided. Individual data profile charts of performance will be completed for future reference.

HPED 210 Motor Development 2c-0l-2sh
Corequisite: HPED 200
A study of the processes of growth and development and their effects upon human motor behavior across the lifespan. Includes changes during physical growth, maturation and aging, and subsequent effects upon cognitive, perceptual, and physiological performance, both individually and within a sociocultural context.

HPED 211 Dance, Rhythmic Activities, and Gymnastics 2c-4l-3sh
Prerequisite: HPED 200
Designed to provide an aesthetic and kinesthetic movement experience which will prepare the student as a teacher of basic movement in a variety of situations. The dance section will include creative movement, rhythms, and square, folk, and contemporary dance. Gymnastics will include basic tumbling, stunts, and apparatus skills.

HPED 212 Team Sports 2c-4l-3sh
Prerequisite: HPED 200
Introduces students to the history, current status, and teaching similarities among team sports. Also includes materials and methods unique to each sport.

HPED 213 Individual and Dual Sports and Adventure Activities 2c-4l-3sh
Prerequisite: HPED 200
Provides historical and current status of individual and dual sports, as well as adventure activities. Includes skill development, analysis of skilled performance, and strategies for planning and implementing instructional programs.

HPED 221 Human Structure and Function 3c-0l-3sh
Anatomical organization of the human body, surveyed in sufficient depth to prepare students for physiology, biomechanics, and adaptive physical education.

HPED 230 Aerobic Fitness 1c-2l-2sh
An opportunity to participate in a variety of aerobic activities; will aid fitness leaders in developing and implementing several types of aerobic programs; will offer current information on aerobics as preventive medicine.

HPED 242 Emergency Health Care 1c-2l-1sh
American Red Cross Standard, Advanced, and Instructor's certification and Multimedia Instructor's certification awarded upon successful completion of this course.

HPED 251 Foundations of Safety and Emergency Health Care 3c-0l-3sh
Focuses on accident prevention, injury control, and first responder's skills. Emphasizes identification of causes of accidents, recommended countermeasures, and mitigation. American Red Cross certifications are issued in (1) standard first aid, (2) community CPR, (3) instructor of standard first aid, and (4) instructor of community CPR.

HPED 252 Introduction to the Driving Task 2c-2l-3sh
Provides an in-depth treatment of operating a motor vehicle competently in all major variations and under most conditions encountered in traffic. A competent operator is one who performs the total driving task knowledgeably and skillfully and demonstrates full understanding and application of identification, prediction, decision, and execution process.

HPED 261 Water Safety Instructor 0c-2l-1sh
Prerequisites: Departmental consent and lifesaving certification
Emphasizes the teaching aspect of skills, techniques, and attitudes necessary in all areas of swimming. Students successfully completing course are qualified to hold such positions as waterfront directors, aquatic directors, and other similar positions.

HPED 263 Aquatics 0c-2l-1sh
Basic performance techniques in swimming strokes presented with special emphasis on teaching methodology, aquatic sports and games, water safety, skin diving, springboard diving, and other aquatic activities.

HPED 264 Advanced Aquatics 0c-2l-1sh
Swimming and rescue skills necessary to complete American Red Cross Senior Lifesaving Course. An emphasis will be placed upon a broad range of other aquatic experiences and teaching strategies.

HPED 270 Instructor of Handicapped Swimming 0c-2l-1sh
Prerequisite: HPED 261
Concerned with the learning of skills used to teach swimming to exceptional children. All handicaps are considered. Important not only in physical education but also for the mentally retarded, rehabilitation education, agency personnel, postgraduate swimming education, YMCA Boys Clubs, community programs, private clubs, and industrial programs. The Red Cross certification Instructor of Swimming for the Handicapped is granted upon successful completion of the course. Taught in the Summer only.

HPED 271 Instructor of Scuba Diving 0c-2l-1sh
Prerequisite: HPED 262
Prepares instructors to teach skin and scuba diving. An emphasis is placed on teaching methods, use and mechanics of equipment, safety, diving physics and physiology, and advanced diving skills. Instructor of Scuba Diving certificate granted by the Professional Association of Diving Instructors upon successful completion of the course. Taught in the Summer only.

HPED 272 Instructor of Canoeing 0c-2l-1sh
Prerequisite: HPED 266
Concerned with the learning of skills pertinent to teaching canoeing to beginners. All aspects of canoeing including paddling, repair of equipment, white water canoeing, safety, survival, and teaching techniques are presented. The Red Cross certification Canoeing Instructor is granted upon successful completion of the course. Taught in the Summer only.

HPED 273 Instructor of Sailing 0c-2l-1sh
Prerequisite: HPED 266
Concerned with learning of skills pertinent to teaching beginning sailing. All aspects of sailing are considered, including the elements of sailing, repair of equipment, racing, safety, and techniques of teaching. Taught in the Summer only.

HPED 274 Instructor of Infants and Preschoolers in Swimming 0c-2l-1sh
Prerequisites: HPED 261, instructor's consent
Methods course for preparation of swimming instructors in the knowledge and skills of teaching young children to swim. YMCA certification Instructor of the Very Young granted upon successful completion of course requirements. Taught in the Summer only.

HPED 276 Coaching of Swimming 0c-2l-1sh
Prerequisite: HPED 261
A lecture-discussion methods course designed to prepare Health and Physical Education majors for coaching of swimming. An emphasis is placed on training methods, officiating, nutrition, scientific principles, and meet strategy. Taught in the Summer only.

HPED 279 Swimming Pool Maintenance and Chemistry 2l-0l-2sh
Prerequisite: HPED 264
A lecture-discussion course designed to teach fundamental water chemistry, filtration, treatment of water problems, winterization of outdoor pools, and pool management. An emphasis is placed on water testing and analysis of chemicals and bacteria. Taught in the Summer only.

HPED 280 Aquatic Facilities Management 2l-0l-2sh
Prerequisite: HPED 264
An organizational and administrative course designed to prepare the aquatic professional for management of indoor and outdoor facilities. Includes facility design, safety procedures activity, and sport and recreational aspects. Taught in the Summer only.

HPED 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

HPED 315 Biomechanics 3c-0l-3sh
Prerequisite: HPED 221
A study of the relationship between mechanical and physical principles and human movement. (Offered as HP 246 prior to 1998-99)

HPED 318 Preprofessional Experience I 3c-0l-1sh
Prerequisite: Health and Physical Education majors only
Recommended Prerequisite: HPED 321
Students teach as assistants to a faculty member in two different activities, one in physical education (general education) and one in elementary physical education at the University School. The emphasis will be on unit development, class management, leadership skills, and evaluation.

HPED 319 Preprofessional Experience II var-3sh
Prerequisites: Advanced standing, departmental approval
Students may request an assisting/teaching/leadership assignment in certain university-related areas that may be either instructional or noninstructional in nature. Examples of such professional areas are adaptives, recreation, dance, coaching, aquatics, intramurals, administration, elementary, service or major classes, club activities, and assisting in laboratory or the training room.

HPED 321 Methods in Elementary Health and Physical Education 3c-0l-3sh
Prerequisite: Junior standing
Guides the professional student in the development of competencies essential to teaching health and physical education at the elementary school level. Includes theories of instruction in health science, necessity of a safe and healthful school environment, and judicious utilization of school and community health resources and service, as well as study of theories of and movement relevant to elementary school children. Observation, materials, methods of teaching, and opportunities for intern teaching provided.

HPED 325 School and Community Health 3c-0l-3sh
Prerequisite: Junior standing
Introduces students to the role of school and community in protecting and promoting the health of its members. Topics include historical development of the concepts of health and health education, identification of national and community goals to reduce risk of disease and enhance health status, and the responsibilities of both school and community toward achieving these goals.

HPED 333 Psychology of Coaching 2c-0l-2sh
The goals of athletics in schools and communities; principles and responsibilities of the coach; current problems.

HPED 335 Coaching and Managing of Athletic Programs 3c-0l-3sh
Lecture course designed to prepare students for coaching or administering an athletic program. Emphasizes the professional preparation and responsibilities of a coach, the support and auxiliary personnel working under and with the coach, and the coach's responsibility to the athletes, plus the administrative responsibilities of coaching.

HPED 341 Evaluation in Health and Physical Education 3c-0l-3sh
Prerequisite: Junior standing
Evaluation theory, instructional objectives, and cognitive test construction; technical and practical considerations in testing and interpretation of test results in both health and physical education.

HPED 343 Physiology of Exercise 3c-0l-3sh
Prerequisite: HPED 221
Physiological effects of exercise in humans. Major factors of diet, conditioning, physical fitness, maximum performance level, and fatigue are considered.

HPED 344 Adapted Physical Education 3c-0l-3sh
Prerequisite: HPED 246
Recognition of structural deviations, corrective exercises, and physical education programs for a wide range of handicaps.

HPED 345 Athletic Training 3c-0l-3sh
Prerequisite: HPED 221 or equivalent applied anatomy course
A survey of common athletic injuries with emphasis on etiology, pathophysiology, and classification. General injury assessment and management procedures will also be presented.

HPED 346 Athletic Training Lab 0c-2l-1sh
Corequisite: HPED 345
Designed to develop basic athletic training skills for the beginning and intermediate athletic training student. The emphasis will be directed towards athletic taping and wrapping, contemporary immobilization and ambulation devices, protective sports equipment, and transportation and transfer of the injured athlete.

HPED 350 Health Aspects of Aging 3c-0l-3sh
Prerequisites: PSYC 101, SOC 151, and junior standing
Current theory and research related to gerontology will be introduced to increase students understanding of the physical and psychosocial dimensions of aging. Additionally, this course will emphasize lifestyle factors and disease prevention aspects of aging. Recommended for students who plan to work with older adults.

HPED 353 Driver Education Program Management 3c-0l-3sh
Emphasizes the development, organization, and management of high school driver education from the standpoint of its historical development to its present programs designed to meet the demands of the highway transportation system. Special emphasis on the role of the teacher in conducting a high-quality program that will meet with student, parent, school, and community approval.

HPED 354 Application of Driver Education Instructional Modes 2c-2l-3sh
Prerequisites: HPED 251, 252, 353
Prepares prospective driver education teachers to plan, teach, and evaluate the four modes of driver education (classroom, on-road, simulation, and multiple-vehicle range). Teaching high school students in supervised laboratory sessions is provided.

HPED 365 Advanced Athletic Training 3c-2l-3sh
Prerequisites: HPED 345, 346
Designed to teach assessment procedures, evaluation methods, and proper athletic training protocol for neuromuscular and skeletal muscle injuries. In addition, administrative issues in athletic training will be addressed emphasizing accurate medical documentation. The emphasis will be placed on subjective and objective assessment and documentation of findings.

HPED 372 Health and Physical Education for Special Populations 2c-0l-2sh
Prerequisite: EDEX 112; junior level or above
Methods and techniques of teaching health and physical education to special populations will be explored. Designed primarily for students majoring in special education, the course will focus on handicapping conditions, limitations imposed by such conditions, and the responsibility of the special education teacher working in the physical education setting.

HPED 375 Physiological Basis of Strength Training 3c-0l-3sh
Designed to give the student the anatomical and physiological basis of muscle function. Students should also gain an understanding of changes that can be made through weight training and knowledge of programs that will bring about these changes. Opportunities for working with various types of equipment will be available.

HPED 376 Athletic Training Clinical Practicum I 0c-2l-1sh
Prerequisites: HPED 251, 345, 346
Provides the opportunity to develop and demonstrate proficient psychomotor skills within the domains of athletic injury prevention and acute care, in coordination with a one-semester clinical field experience. This clinical field experience will allow each student an opportunity to practice and apply skills taught within this course under the direction of a clinical instructor within the IUP Athletic Department or an affiliated clinical site. Specific skills emphasized include, but are not limited to, those relating to safety/risk management, conditioning, equipment fitting, taping and wrapping, acute care, and transportation/transfer of the injured athlete. Restricted to students seeking certification by the National Athletic Trainers Association.

HPED 377 Athletic Training Clinical Practicum II 0c-2l-1sh
Prerequisite: HPED 365
Provides the opportunity to develop and demonstrate proficient psychomotor skills within the domain of athletic injury assessment, in coordination with a one-semester clinical field experience. This clinical field experience will allow each student an opportunity to practice and apply skills taught within this course under the direction of a clinical instructor within the IUP Athletic Department or an affiliated clinical site. Specific skills emphasized include, but are not limited to, those relating to anatomical landmarks' identification, orthopedic and neurological evaluation, and general medical examination. Restricted to students seeking certification by the National Athletic Trainers Association.

HPED 408 Guided Research Problem var-2sh
Prerequisite: Permission of department chairperson
Selection and research of a problem pertinent to student interests and those of the professions of health, physical education, and recreation. Classes held on a seminar basis.

HPED 410 Exercise Prescription 3c-0l-3sh
Prerequisite: HPED 343
Designed to teach individuals to write exercise prescriptions based upon a subject's tolerance for physical activity. Special emphasis on risk factors, techniques of evaluation, drugs, injuries, environmental factors, and motivation and their role in physical activity assessment.

HPED 411 Physical Fitness Appraisal 3c-0l-3sh
Involves the selection, administration, and interpretation of various tests for appraising the physical fitness levels of individuals. Information given concerning the various fitness components, and discussions held so that each student gains an understanding of the variables to be tested.

HPED 412 Physical Activity and Stress Management 3c-0l-3sh
Acquisition of necessary understanding of anxiety and stress: their nature, place in society, and intervention strategies as they relate to physical activity.

HPED 413 Physical Activity and Aging 3c-0l-3sh
Presents major aspects of physical activity, its importance to the older adult, and the organization of an activity program. Attention to physiology of physical activity, effects of activity on growth and aging, exercise prescription, flexibility, overweight and obesity, and motivational strategies.

HPED 426 Health Science Instruction 3c-0l-3sh
Health curriculum– K-12, methods and media of instruction in health science.

HPED 430 The American Woman and Sport 3c-0l-3sh
Comprehensive, multidisciplinary analysis of the problems, patterns, and processes associated with the sport involvement of girls and women in our culture. Presents historical perspective with an emphasis on physiological, psychological, and sociocultural influences.

HPED 441 Psychosocial Implications for Health and Physical Education 3c-0l-3sh
Prerequisite: Senior standing
A study of psychological and sociological influences, both theoretical and empirical, and their effects upon health and physical performance.

HPED 442 Seminar in Health, Physical Education, and Recreation I 3c-0l-3sh
Theory and philosophy of health, physical education, and recreation; current issues and problems; innovative and creative programs.

HPED 446 Therapeutic Modalities 3c-2l-4sh
Prerequisite: HPED 365
A basic introduction to the use of therapeutic modalities and the role they play in the rehabilitation of athletic injuries. Physical agents used in the care of athletic injuries will be presented highlighting the physiological effects of each modality, as well as indications and contraindications for their use.

HPED 447 Cardiopulmonary Resuscitation (CPR) Instructor 1c-1l-1sh
Prerequisite: Basic CPR certification
A study of methods and skills necessary to certify instructors of cardiopulmonary resuscitation and multimedia first aid. Successful completion of requirements leads to certification by the American Health Association and the American Red Cross. Taught in the Summer only.

HPED 448 Therapeutic Exercises for Athletic Injury Management 3c-2l-4sh
Prerequisite: HPED 365
The theoretical framework for athletic injury assessment and management of the injured athlete is discussed. A problem-solving approach to the selection and implementation of specific tests and therapeutic interventions is utilized. An overview of therapeutic management as well as the development of skill in basic therapeutic exercise procedures for improving muscle performance, relaxation, and mobilization is included.

HPED 450 Curriculum and Programming in Sexuality Education 3c-0l-3sh
Topics include anatomy and physiology of the human reproductive tracts, development, birth defects, contraception, venereal disease, and abortion. Not for credit toward degrees in Biology.

HPED 476 Athletic Training Clinical Practicum III 0c-2l-1sh
Prerequisite: HPED 365
Provides the opportunity to develop and demonstrate proficient psychomotor skills within the domains of athletic training organization/administration and education/guidance, in coordination with a one-semester clinical field experience. This clinical field experience will allow each student an opportunity to practice and apply skills taught within this course under the direction of a clinical instructor within the IUP Athletic Department or an affiliated clinical site. Specific skills emphasized include, but are not limited to, those relating to communication, record keeping, planning, budgeting and purchasing, facility design, policies/procedures, and other athletic health care managerial/administrative duties. Athletic training instruction and guidance skills will also be addressed. Restricted to students seeking certification by the National Athletic Trainers Association.

HPED 477 Athletic Training Clinical Practicum IV 0c-2l-1sh
Prerequisites: HPED 446, 448
Provides the opportunity to develop and demonstrate proficient psychomotor skills within the domain of athletic injury rehabilitation, in coordination with a one-semester clinical field experience. This clinical field experience will allow each student an opportunity to practice and apply skills taught within this course under the direction of a clinical instructor within the IUP Athletic Department or an affiliated clinical site. Specific skills emphasized include, but are not limited to, exercise, manual therapy, and other advanced musculoskeletal screening and therapeutic intervention techniques. Restricted to students seeking certification by the National Athletic Trainers Association.

HPED 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

HPED 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

HPED 485 Student Assistance Program Training 3c-0l-3sh
Prerequisites: Junior standing and EDSP 102
Introduces the student to the concept of Student Assistance Programs (SAP) in schools. Includes the history of SAP, current involvement in public education, and the educator's role as an SAP member. Provides an experiential basis for preparation to assume the role of an SAP member. Note: Majors in the B.S.Ed.-Health and Physical Education program will have first opportunity to enroll in class; any openings in the class will then be offered to Elementary and Secondary Education majors.

HPED 492 Health Fitness Instruction 3c-0l-3sh
Prerequisites: HPED 221, 343, 441 or equivalent
The purpose is to acquire the knowledge, skills, and abilities required to develop programs of physical activity and fitness for healthy adults and those with controlled disease. Experience in leading an exercise class, knowledge of functional anatomy, and exercise physiology is also expected prior to participation in the class.

HPED 493 Internship var-3-12sh
Educational opportunity which integrates classroom experience with practical experience in community service agencies or industrial, business, or governmental organizations. Junior standing required.

HRIM Hotel, Restaurant, and Institutional Mngmnt.

Department of Hotel, Restaurant, and Institutional Management
College of Health and Human Services

HRIM 101 Introduction to the Hospitality Industry 3c-0l-3sh
A study of the development and current status of the hospitality industry. Major hotel, restaurant, and related area employers are profiled. Career opportunities are discussed. Guest speakers from various hospitality industry segments are featured.

HRIM 115 Introduction to Tourism 3c-0l-3sh
Introduces the student to concepts pertaining to international and domestic tourism. Course examines the economic, social, and cultural aspects of tourism as well as how destinations are marketed.

HRIM 245 Diversity and Multicultural Management in the Hospitality Industry 3c-0l-3sh
Prerequisite: Sophomore standing
Course will explore what happens when diverse people work together in the hospitality industry. It will also examine the effects of international migration and the changing roles of women and other minorities which lead to multicultural urban centers within the United States and other hospitality venues. Furthermore, it will also focus on the cultural factors affecting productivity in the culturally diverse hospitality environment.

HRIM 259 Hospitality Purchasing 3c-0l-3sh
Prerequisite: FDNT 150 or equivalent
Includes sources, standards, grades, methods of purchase, and storage of various foods, beverages, and fixtures. An emphasis will be on the development of purchasing policies and specifications.

HRIM 260 Hotel Systems Management 3c-0l-3sh
Development and application of management skills as applied to the rooms division of a hotel. Specific emphasis will be placed on front office procedures, the relationship between the hotel's rooms division, food and beverage, and supports areas, and safety and security concerns. (Offered as HRIM 360 prior to 2000-2001)

HRIM 281 Special Topics var 1-3sh
Prerequisites: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

HRIM 299 Cooperative Education (First Experience) 0sh
Prerequisites: Completion of 30sh, 2.0 GPA
A semester-long program designed to combine classroom theory with practical application through job-related experiences. The student is required to complete two alternating experiences; only one may be a summer experience.

HRIM 313 Food Systems I 2c-var-4sh
Prerequisites: FDNT 150, HRIM 259, permission; professional chef's uniform required
A basic course in quantity food production with experience in planning, purchasing, preparing, and serving nutritionally adequate meals. Requirements of the National School Lunch program emphasized in satellite and on-premises food service. Requires some preparation and service outside regularly scheduled class time.

HRIM 350 Introduction to the Casino Industry 3c-0l-3sh
Prerequisite: Sophomore standing or permission of the professor
Introduces the student to the multi-billion-dollar casino industry. Examines the gaming industry from a historical perspective and includes legal, social, and economic issues. Also reviews the various games played in casinos and the current trends, as well as the most popular casino destinations in the world. Special attention will be devoted to the growth of casinos on cruise ships, on Native American reservations, and on riverboats in the U.S. Includes a field trip to Atlantic City or another casino setting, which occurs on a weekend. This field trip serves as a catalyst to appreciate all of the theoretical concepts discussed in the lectures.

HRIM 356 Human Resources in the Hospitality Industry 3c-0l-3sh
Prerequisites: HRIM 313, PSYC 101
Organization and administration of hospitality business, including human resource theories and policies, work simplification, training, communication, and safety.

HRIM 358 Food Service Equipment and Facilities Design 3c-0l-3sh
Prerequisite: HRIM 313
Examines types and uses of food service production and service equipment with emphasis on incorporation into an effective facilities design. Field trips permit investigation of a variety of unit designs.

HRIM 365 Hotel Facilities Management 3c-0l-3sh
Prerequisite: HRIM 101
Analyzes principles of hotel design, construction, and physical plant management. Housekeeping and maintenance department operations are discussed.

HRIM 401 Cost Management 3c-0l-3sh
Prerequisites: HRIM 313, 356
Food, beverage, and labor controls for hospitality or health care operations, including relationships between budgetary information and managerial decision making to meet financial needs.

HRIM 402 Beverage Management 3c-0l-3sh
Prerequisite: Verifiable proof of 21 years of age or permission
Examines the principles, processes, and theories of beverage service. Analysis of methods of alcoholic beverage production and examination of categories of spirits, malt beverages, and wine, as well as legal concerns of service. Development and marketing of beverage operations are discussed. Includes voluntary tasting and evaluation of alcoholic beverage products. (Offered as HR 306 Food and Beverage Management prior to 2000-01)

HRIM 406 Catering and Banquet Management var-3sh
Prerequisites: HRIM 313, majors only; chef's uniform and wait-staff attire required
Profitable organization, preparation, and service of catered events in both on- and off-premises locations are the main emphases. Requires meeting times other than listed in order to meet course objectives.

HRIM 408 Institutions Management 3c-0l-3sh
Prerequisites: ACCT 201, HRIM 313, 356, senior standing
A compendium of the concepts of managing human resources, capital, materials, equipment, and markets as related to various hospitality property systems. Focus on concept development and managerial decision making.

HRIM 411 Seminar in Hospitality Management 3c-0l-3sh
Prerequisites: HRIM 360, 365
An analysis of the current trends and practices within hospitality industry as related by industry professionals. Includes researching topics and writing at least three research papers. Carries writing-intensive credit.

HRIM 413 Advanced Restaurant Operations 1c-6l-4sh
Prerequisites: HRIM 313 and permission
A food and beverage systems course with emphasis on restaurant front- and back of-house operations management. Students research, plan, prepare, and present theme-oriented dinners showcasing selected domestic and international cuisine. Students function as both operations employees and managers within the department's food and beverage operation.

HRIM 420 Hotel Sales 3c-0l-3sh
Prerequisites: HRIM 101 and 260
A practical approach to understanding the functions and activities of the sales department within a hotel property. A thorough review of the organizational structure of a typical hotel sales department and documentation used by the department will be made. Identification of and approaches to securing typical hotel market segments will be made.

HRIM 433 Educational Study Tour var-2-6sh
Comprehensive program of directed activities permits firsthand experiences in the historical and cultural aspects of the hospitality industry worldwide. Visits to renowned operations will be included in the tour.

HRIM 481 Special Topics var-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergradoate students.

HRIM 482 Independent Study in Hospitality Management var-1-6sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. Must apply a semester in advance and have 60sh earned.

HRIM 493 Internship in Hospitality Management var-6-12sh
Prerequisites: 57sh earned, 2.0 GPA, and completion of an approved 440-hour Work Experience I
An opportunity for students to work in a supervised experience directly related to the HRIM major. Must meet university and departmental internship requirements. Minimum of 440 hours required during the internship.

Note: White uniforms including white shoes are required for all lab courses where food is prepared. Students must meet the professional dress requirements of the department.

IFMG Information Management

Department of Management Information Systems and Decision Sciences
Eberly College of Business and Information Technology

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course. Business majors (except those majoring in Business Education) who have not achieved Junior Standing are normally not permitted to enroll in 300- or 400-level courses.

IFMG 101 Microbased Computer Literacy 3c-0l-3sh
An introductory course designed to provide students with a fundamental understanding of computers. Familiarizes students with the interaction of computer hardware and software. An emphasis is placed on the application of microcomputers, the use of productivity software (word processing, spreadsheet management, file and database management), and the social and ethical aspect of the impact of computers on society. Note: Course is cross-listed as BTED101 and COSC 101. Any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

IFMG 201 Internet and Multimedia 3c-0l-3sh
Prerequisite: BTED/COSC/IFMG 101 or prior exposure to word processing and electronic mail
The major focus will be on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. This information literacy course is designed for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students will learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BTED/CM/COSC/IFMG/LIBR 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

IFMG 205 Foundations of MIS 3c-0l-3sh
Prerequisite: BTED/COSC/IFMG 101
An introductory course designed to provide students with a fundamental understanding of MIS. Systems theory, quality, decision making, and the organizational role of information systems are introduced. Information technology, including basic programming skills, is stressed. Concepts of organization, information system growth, telecommunications, and re-engineering are introduced.

IFMG 251 Business Systems Analysis and Design 3c-0l-3sh
Prerequisites: ACCT 201 and IFMG205
Involves teaching the tools and techniques required for the analysis and the design of business systems. The major steps in the system's development life cycle are presented along with practical applications from the major subsystems of typical business organizations. Issues related to personnel, hardware, software, and procedures are explored as students work individually and in project teams to solve typical business application problems.

IFMG 255 Business Applications in COBOL 3c-0l-3sh
Prerequisites: ACCT 201 and IFMG 205
Introduces the student to the COBOL programming language as it applies to business organizations and their applications. Structured COBOL concepts and methods are taught as the student learns how to solve business problems using computers. The student will be involved using files, reports, and tables to produce a variety of outputs utilized in operating and managing business activities.

IFMG 261 Micro Database Systems 3c-0l-3sh
Prerequisite: BTED/COSC/IFMG101
The fundamentals of database management including different database models and database design issues will be examined. Emphasizes the use of various tools of relational database software, including report generators, screen builders, and query facilities. Design techniques and software tools will be used in creating a database application. Intended as an elective for business students who are not majoring in MIS. MIS majors will not be allowed to count this course towards satisfying their graduation requirements.

IFMG 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

IFMG 300 Information Systems: Theory and Practice 3c-0l-3sh
Prerequisites: ACCT 202, COSC/BTED/IFMG 101
Includes basic MIS concepts, fundamentals, and practices. Broad areas of coverage are principles, the computer as a problem-solving tool, Computer-Based Information Systems (CBIS), organizational information systems, and Information Systems management.

IFMG 350 Business Systems Technology 3c-0l-3sh
Prerequisite: COSC 220 or IFMG 255
Student is taught fundamental and advanced concepts of computer hardware and a procedure for evaluation and acquisition of computer hardware.

IFMG 352 LAN Design and Installation 3c-01-3sh
Prerequisite: BTST 313 or IFMG 350 or any COSC course numbered 300 or higher
A study of fundamental local area networking concepts. Detailed study of the basics of local area network (LAN) technology. Comparative study of commercially available LAN systems and products. Features a hands-on laboratory implementation of a LAN. Cross-listed as COSC 352. Either course may be substituted for the other for D/F repeats but may not be taken for duplicate credit.

IFMG 354 Testing and Controlling LANs 3c-01-3sh
Prerequisite: COSC 352 or IFMG 352 or equivalent
Explores local area network (LAN) topologies and their associated protocols. Introduces ways of interconnecting, securing, and maintaining LANs. Provides students with hands-on experience in the interconnection of multiple LANs. Also presents a hands-on approach to design, testing, and administration of interconnected LANs. Cross-listed as COSC 354. Either course may be substituted for the other for D/F repeats but may not be taken for duplicate credit.

IFMG 370 Advanced COBOL 3c-0l-3sh
Prerequisite: COSC 220
Corequisite: IFMG 350
A continuation of introductory COBOL with an emphasis on structured methodology of program design, development, testing, implementation, and documentation of common business-oriented applications. It includes a heavy emphasis on the techniques and concepts of the table processing, file organization, and processing alternatives, internal and external sorting, subroutines, and application development for both the batch and on-line systems. Micro Focus COBOL software is utilized.

IFMG 372 Microcomputer Applications 3c-0l-3sh
Prerequisites: ACCT 201, COSC 220, IFMG 350, or by permission
Demonstrates how to use the microcomputer in business and how to provide technical assistance to users of the microcomputer. An emphasis will be placed on integrating software and interfacing with mainframe computers or with minicomputers. Topics covered include microcomputer hardware, microcomputer operating systems, local area networks, and microcomputer software tools.

IFMG 382 Auditing for EDP Systems 3c-0l-3sh
Prerequisites: ACCT 201, COSC 220 or IFMG 255
Emphasizes the responsibility of the systems analyst to include in systems design the proper management and financial controls and audit trails in business information systems. The design of controls for application programs and systems is covered. Audit software packages are examined.

IFMG 450 Database Theory and Application 3c-0l-3sh
Prerequisites: IFMG 370, upper-division students only
After learning data structures, the student will then apply them to CODASYL compatible database management systems, TOTAL, and IBM's database management system. Student must develop and use a database as part of requirement. [Course revision in process]

IFMG 451 Systems Analysis 3c-0l-3sh
Prerequisites: IFMG 350 and 255 or COSC 220
Develops an understanding of concepts and techniques involving conventional and structured approaches to analyzing problems of business information systems and systems definition feasibility, as well as quantitative and evaluative techniques of business information systems analysis.

IFMG 455 Data Warehousing and Mining 3c-01-3sh
Prerequisites: IFMG 450 or 261 or COSC 441, and MATH 214 or 216
Introduces students to the strategies, technologies, and techniques associated with this growing MIS specialty area. Composed of two main parts. In the first part, students will learn the basic methodolngy for planning, designing, building, using, and managing a data warehouse. In the second part, students will learn how to use different data mining techniques to derive information from the data warehouse for strategic and long-term business decision making.

IFMG 470 Systems Design 3c-0l-3sh
Prerequisite: IFMG 451
Students learn tools and techniques for design of a business system. Along with classroom discussions of principles and techniques for analyzing, designing, and constructing the system, students will formulate system teams to analyze the problems of an existing business information system, to design an improved system, and to control implementation of a new system.

IFMG 480 Distributed Business Information Systems 3c-0l-3sh
Prerequisite: IFMG 350
A study of the techniques involved in planning, design, and implementation of distributed processing systems. Distributed marketing, financial, and corporate accounting systems are included.

IFMG 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

IFMG 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member. Approval is based on academic appropriateness and availability of resources.

IFMG 485 Seminar: IS Current Topics 3c-0l-3sh
Prerequisites: IFMG 300, senior standing
Current topics and issues in information systems in the business environment are addressed through systematic coverage of current literature and/or electronic sources. Practitioner publications and academic journals integrate emerging technologies and information issues with identification of their impact on the management of business organizations. Not a capstone requirement but a vehicle to explore a variety of topics in the field.

IFMG 493 Internship in MIS var-3-12sh
Prerequisites: IFMG 370, consent of department chairperson and dean
Positions with participating business, industry, or governmental organizations provide the student with experience in systems analysis. **Note:** Internship IFMG 493 can be taken, if the student qualifies, as a general elective. It does not fulfill the major-area elective requirement.

ILR Industrial and Labor Relations

Department of Industrial and Labor Relations
College of Health and Human Services

ILR 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

ILR 426 Case Studies in Labor-Management Relations 3c-0l-3sh
In-depth study of daily labor-management relationships in a variety of organizational settings through utilization of case study technique. Focuses on a problem-solving approach to the legal and contract administration components of the labor-management relationship.

ILR 480 Principles and Practices of Collective Bargaining 3c-0l-3sh
An examination of the historical, legal, and functional parameters of collective bargaining. Topics covered include the organizing process, negotiations, contract administration, dispute resolution, and public sector labor relations.

ILR 481 Special Topics in Industrial and Labor Relations var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

ILR 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ILR 499 Independent Study var-1-3sh
Independent reading and research under the direction of a faculty member.

INDS Interior Design

Department of Human Development and Environmental Studies
College of Health and Human Services

INDS 105 Introduction to Interior Design 3c-0l-3sh
Presents overview of interior design, including introduction to design, selection, and application of components in the interior environment. The emphasis will be upon development of effective design problem solving skills. (Offered as CS 217 Interior Design prior to 1998-99)

INDS 118 Drafting for Construction I 1c-3l-3sh
Introduces two- and three-dimensional graphic skills, including basic drawing, drafting, delineating, perspective drawing; applies principles and elements of design; stresses graphic design and layout. (Offered as CS 117 Design Graphics prior to 1998-99)

INDS 205 Color Theory and Application 3c-0l-3sh
The theoretical basis of color is presented as it relates to the human visual system, light, pigment, perception, and measurement. The application of color theory is discussed in terms of interior design, merchandising, and display. (Offered as CS 205 prior to 1998-99)

INDS 213 Residential Appliances and Consumer Electronics 2c-2l-3sh
Consumer education in the selection, use, and care of home equipment appliances and consumer electronics; the relationship of energy sources and utilities to major appliances, portable and personal care appliances, and consumer electronics. (Offered as CS 213 prior to 1998-99)

INDS 218 Drafting for Construction II 1c-3l-3sh
Prerequisites: INDS 118 and BTED/COSC/IFMG 101
Introduces basic computer-aided drafting and design (CADD) for designers; emphasizes CADD theory and the value of the computer as a problem-solving, design tool.

INDS 281 Special Topics 3c-0l-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics which are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

INDS 305 Interior Lighting 3c-0l-3sh
Prerequisite: INDS 105 or equivalent
Lighting fundamentals applicable to the environmental design of residential and commercial spaces. Includes calculation methods, terminology, theory of color visibility, light source alternatives, fixture function and selection, lighting trends, and related professional organizations. (Offered as CS 465 prior to 1998-99)

INDS 310 Human Factors in Interior Design 3c-0l-3sh
Prerequisite: Junior standing
The study of human and technology systems interface as related to interior design. The emphasis will be on ergonomic and economic decision making to insure that the user can function with a minimum of stress and a maximum of efficiency. (Offered as CS 310 prior to 1998-99)

INDS 312 Housing and Culture 3c-0l-3sh
Managerial, sociological, economic, and aesthetic aspects of housing and people are investigated as well as a consideration of the environment of the home as part of the community. (Offered as CS 312 prior to 1998-99)

INDS 313 Materials and Finishes 3c-0l-3sh
Prerequisite: FSMR 314
An introduction to the modern and historic use and maintenance of materials in architecture, construction, and interior design and the codes and costs that govern their use today. Consideration is given to contemporary methods of harvesting, preparation, and manufacture of building materials and the evaluation of the impact of these processes on the environment.

INDS 315 Residential Design I 1c-3l-3sh
Prerequisite: INDS 218
Applies interior design space planning and design problem solving processes to residential design and emphasizes graphic communication and presentation of solutions. (Offered as CS 357 Interior Design Studio prior to 1998-99)

INDS 319 Residential Design II: Kitchen, Bath, Media Room Design 1c-3l-3sh
Prerequisite: INDS 315
Design elements are applied to kitchen, bath, and media room areas of the residence to provide design solutions supporting individual needs and changing lifestyles. Addresses the needs of special populations. Current national standards will be addressed.

INDS 370 Development of Design I 3c-0l-3sh
A chronological study from ancient times to the mid-nineteenth century of the dominant influences and characteristics of historical interiors, furniture, and ornamental design. An emphasis is placed upon stylistic detail and its relationship to social, economic, political, religious, and aesthetic influence and to the contemporary scene. (Offered as CS 462 Historic Interiors prior to 1998-99)

INDS 380 Development of Design II 3c-0l-3sh
Prerequisite: INDS 370
A chronological study from mid-nineteenth century to the present of the dominant influences and characteristics of the twentieth-century interior, furniture, and ornamental design. An emphasis is placed upon stylistic detail and its relationship to social, economic, political, religious, and aesthetic influences and to contemporary usage. (Offered as CS 463 Modern Interiors prior to 1998-99)

INDS 405 Interior Design Professional Practice 3c-0l-3sh
Prerequisite: Junior standing
Planning, business organization, management, contracts, procedures, and ethics for the professional interior designer. (Offered as CS 468 prior to 1998-99)

INDS 433 Study Tour var-1-6sh
Prerequisite: Upper-level standing
Opportunity is provided to visit business establishments and cultural centers concerned with household equipment, furnishings, textiles, clothing, and housing in America as well as abroad. Museums, factories, designers' showrooms, distribution centers, stores, cultural events, and seminars are included. Course may be repeated for a total of 6sh. (Cross-listed as CNSV/FSMR 433.)

INDS 464 Contract Design I 1c-3l-3sh
Prerequisite: INDS 319
Applies interior design space planning and design problem-solving processes to nonresidential design and links goals in interior design and facility management. (Offered as CS 464 Interior Planning and Drawing prior to 1998-99)

INDS 465 Contract Design II 1c-3l-3sh
Prerequisite: INDS 464
A studio, project-based course, ascertaining the process to be followed in developing large-scale nonresidential interior design schemes of over 10,000 square feet.

INDS 481 Special Topics 3c-0l-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics which are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

INDS 482 Independent Study var 1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

ITAL Italian

Department of French
College of Humanities and Social Sciences

ITAL 101 Basic Italian I 3c-0l-3sh
Introduces students to the Italian language, with emphasis on the four basic skills: reading, writing, speaking, and listening. Students will also gain knowledge of Italian culture. Primary emphasis is on the mastery of oral communication and basic writing skills. Attendance and language lab practice are required.

ITAL 102 Basic Italian II 3c-0l-3sh
Prerequisite: ITAL 101 or equivalent
A continuation of Basic Italian I. Introduces students to the Italian language, with emphasis on the four basic skills: reading, writing, speaking, and listening. Students will also gain knowledge of Italian culture. Primary emphasis is on the continuing mastery of oral communication and writing skills. Attendance and language lab practice are required.

ITAL 201 Intermediate Italian III 3c-0l-3sh
Prerequisites: ITAL 101 and 102 or equivalent
An intermediate-level course for students who have previously studied Italian. A continuation of mastery of the four skills: reading, writing, speaking, and listening. Students will also increase their knowledge of Italian history, culture, and literature.

ITAL 202 Intermediate Italian IV 3c-0l-3sh
Prerequisite: ITAL 201 or equivalent
An intermediate-level course for students who have previously studied Italian. Students will continue their progress in the mastery of the four skills: reading, writing, speaking, and listening. The emphasis will be on increasing proficiency in reading and writing. Students will also increase their knowledge of Italian history, culture, and literature.

ITST International Studies

Department of Political Science
College of Humanities and Social Sciences

ITST 281 Special Topics in Non-Western Studies var-1-3sh
Focuses on politics, society, and culture of a particular non-Western country or area. Content is variable, depending on the semester. Will be taught by visiting exchange professors from non-Western countries. This Special Topics course may be offered on a continuing basis.

ITST 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

JRNL Journalism

Department of Journalism
College of Humanities and Social Sciences

JRNL 102 Basic Journalistic Skills 3c-0l-3sh
Prerequisite: ENGL 101
Required for journalism majors and minors. The emphasis will be on grammar, punctuation, spelling, *AP Stylebook*, copyediting, headlines, and accuracy.

JRNL 105 Journalism and the Mass Media 3c-0l-3sh
Prerequisite: ENGL 101
A critical examination of roles-goals of newspapers, magazines, radio, books, movies, and television as they affect American society socially, politically, and economically.

JRNL 120 Journalistic Writing 3c-0l-3sh
Prerequisite: ENGL 101, nonmajors/minors
The emphasis will be on intelligent use of writing ability in a journalistic style and understanding of the why of journalism and mass media. Practices and improves writing skills.

JRNL 220 Writing for the Print Media 3c-0l-3sh
Prerequisites: JRNL 102 (grade of C or better), majors only
A course in journalistic style intended for students who plan to become professional writers. Teaches the basic journalistic formats and strategies used in print media such as the summary lead, the delayed lead, and the conventional news-story format. Throughout emphasizes economy, clarity, and the development of voice for a given medium.

JRNL 243 History of the American Press 3c-0l-3sh
Prerequisite: JRNL 120 or 220
Traces the development of the American press from its Colonial roots. The emphasis will be on the role of the press in political and social development.

JRNL 250 Women and the Press 3c-0l-3sh
Prerequisites: ENGL 101, sophomore standing
Explores the role of women in American journalism. Includes study of lives/careers of women journalists and their specific contributions to the profession. The emphasis will be on evolution of equal opportunity for women and other minorities in the American Press. Attention to the changing definition of news as influenced by the inclusion of women and minorities in editorial roles.

JRNL 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

JRNL 321 Feature Writing 3c-0l-3sh
Prerequisites: JRNL 102, 220
Designed for the student who might work in journalism or who might wish to write on a part-time or free-lance basis.

JRNL 326 Public Relations I 3c-0l-3sh
Prerequisites: JRNL 102, 120 or 220
Introduces students to the principles, practices, programs, and possibilities in the various areas of public relations.

JRNL 327 Layout Design and Production 2c-3l-3sh
Prerequisite: JRNL 105
Provides basic techniques and theories of layout design and production, including typography, copyfitting, photo/art cropping and scaling, and steps in design process. Includes traditional paste-up and desktop publishing in the design of ads, newspapers, newsletters, brochures, and magazines.

JRNL 328 News Reporting 3c-0l-3sh
Prerequisites: JRNL 102, 105, 220, majors only
Includes instruction in writing the news story, preparing copy, interviewing, covering special events, and similar reporting activities.

JRNL 337 Editing 3c-0l-3sh
Prerequisites: JRNL 102, 220
Stresses basic practices such as copyediting and headline writing while also focusing on guidelines for improving accuracy, clarity, transition, spelling, and punctuation of copy. Students use wire service stylebook extensively.

JRNL 344 Issues and Problems 3c-0l-3sh
Prerequisites: JRNL 102, 120 or 220
Students examine critical case histories of ethical and professional situations and circumstances in the mass communication industry in a lecture and discussion format.

JRNL 345 Sports Journalism 3c-0l-3sh
Prerequisite: JRNL 220
Emphasizes skills for covering, writing, and editing of sports and introduces students to specific practices in newspaper, radio-TV, and sports information work.

JRNL 347 Journalism Law 3c-0l-3sh
Prerequisites: JRNL 328, junior/senior standing
Open to nonmajors by permission of the instructor. A survey of the major Supreme Court and state court rulings governing the mass media, especially the news media. Areas include libel, antitrust, free press/fair trial, privacy. Approach is nontechnical.

JRNL 348 The Editorial Page 3c-0l-3sh
Prerequisite: Junior/senior standing
The emphasis will be on the writing of vigorous but thoughtful and fair editorials. Study of contemporary practice and policy on letters to the editor, columnists, cartoons, the op-ed page.

JRNL 375 World News Coverage 3c-0l-3sh
Prerequisite: Sophomore standing
Deals with international news events and analysis of international new coverage in sources from around the world. An emphasis will be placed on analyzing comparative coverage of events in different sources. Students study not only current international news but also how it is reported. The goal of the course is fostering a critical attitude toward news.

JRNL 393 Document Design I 3c-0l-3sh
Prerequisite: Junior/senior standing
Teaches students advanced principles of document design and gives them the opportunity to apply techniques of rhetorical/stylistic analysis, general problem solving, and holistic information display to a wide variety of writing formats used in business, industry, and government news.

JRNL 423 Management in Mass Communications 3c-0l-3sh
Prerequisite: JRNL 493 or field experience
Attention given to the process of advancement to management positions in the advertising, journalism, and public relations industries.

JRNL 427 Publications 3c-0l-3sh
Prerequisite: JRNL 327 or instructor permission
Provides advanced techniques and theories of publications design, including the legibility principles of typography, the psychological impact of color and paper, and designing on-line publications, such as newspapers, newsletters, and magazines. Students will also learn principles and concepts of publications management, including coping with deadline pressures and the creative disposition, and the marketing of publications. The class will produce a total publication.

JRNL 430 Public Opinion and the News Media 3c-0l-3sh
Prerequisite: Junior standing
Deals with understanding and measuring public opinion. An emphasis is placed on critically analyzing the historical origins and the dynamics of public opinion in the policymaking process as well as the role of the news media in public opinion. Students then measure people's thinking on any given issue or issues.

JRNL 446 Research Methods in Journalism 3c-0l-3sh
Prerequisite: JRNL 328 or instructor's permission
Explores theoretical and practical issues in information gathering, with emphasis on data analysis and computer-assisted reporting for public affairs journalism. Students will apply scientific methods in news reporting and analyze the effects of precision journalism on society.

JRNL 450 Advertising Writing 3c-0l-3sh
Prerequisites: JRNL 220, instructor permission
A basic course in the preparation of advertising copy and continuity for all media. It is a combination of lecture and laboratory course. Enrollment is limited to fifteen upperclass majors per semester.

JRNL 455 High School Journalism 3c-0l-3sh
Prerequisite: Junior standing or permission
Aimed at equipping students with basic skills in teaching and student media advising at the high school level. Offers a package of skills ranging from basic elements of news, news writing, editing, newspaper layout and design, student publications advising as well as legal and ethical issues in high school journalism. For nonmajors.

JRNL 481 Special Topics var-1-4sh
Prerequisite: As appropriate to course content
These courses vary from semester to semester, covering a number of journalism specialties. From time to time they are converted to permanent course numbers. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

JRNL 482 Independent Study var-1-6sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Opportunities for independent study that goes beyond the usual classroom activities. Approval is based on academic appropriateness and availability of resources; enrollment is limited to fifteen upperclass majors per semester.

JRNL 490 Public Relations II 3c-0l-3sh
Prerequisites: JRNL 220, 326
A public relations writing class that includes assignments such as releases, features, newsletters, reports, biographies, rewrites, hometown stories, copyediting, interviewing, research, and special projects.

JRNL 491 Presentation Making 3c-0l-3sh
Prerequisites: JRNL 220, 326
Gives the student practice in writing and making oral presentations based on public relations cases and problems. Familiarizes the student with problem-solving and small-group communication skills necessary for those working in the area of public affairs.

JRNL 492 Problem-solving in Public Relations 3c-0l-3sh
Prerequisite: JRNL 328
Introduces students to techniques for analyzing and tracking information flow in organizations. Introduces students to creative problem-solving techniques which are standard practice in corporate research groups.

JRNL 493 Internship var-6-12sh
Prerequisites: JRNL 102, 105, 220, 328, department approval
On-the-job training opportunities in journalism and related areas. Maximum of 6sh may be applied to 30sh minimum of major.

JRNL 494 Document Design II 3c-0l-3sh
Prerequisites: JRNL 328, 393
Gives students advanced work in preparation of substantial corporate and government documents such as annual reports, lengthy project reports, and research reports, etc. Emphasizes skills in research of public and government documents, data analysis and problem solving, holistic information display, writing, and editing.

LATN Latin

Department of Spanish and Classical Languages
College of Humanities and Social Sciences

LATN 101 Elementary Latin I 4c-0l-4sh
For beginning students. The emphasis is on oral and reading skills. Students will learn most of the Latin noun system; they will also learn how to answer simple and moderately difficult Latin questions. There are also short readings in easy Latin. Students learn significant differences between Latin and English. Attendance is required.

LATN 102 Elementary Latin II 4c-0l-4sh
A continuation of LATN 101. In grammar, students finish the noun system and learn several Latin tenses, including the perfect tense. Latin questions, oral and written, remain an important part of the course, as do the readings. There are class discussions and a paper on readings in English from Sophocles, Tacitus, and Cicero. Attendance is required.

LATN 201 Intermediate Latin 4c-0l-4sh
More of the verb system is learned; while grammatical studies continue, more emphasis is placed on learning how to read short, intermediate-level selections from Latin literature. Oral and written questions continue. Ovid's *Metamorphoses* is the topic for class discussion and a paper. Liberal Studies credit is given.

LATN 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explure topics that are not inclnded in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

LATN 351 Advanced Latin I 3c-0l-3sh
Reviews grammar in depth; analyzes the structure of the language. Written themes are not required. Selections from Latin prose are read for knowledge of their content and for developing knowledge of the structure of the language. Offered only by individualized instruction.

LATN 352 Advanced Latin II 3c-0l-3sh
A continuation of LATN 351. Selections are from poetry this semester.

LATN 361 Development of Roman Culture and Literature 3c-0l-3sh
Latin poetry and history will be read to show the influence of political and social ideas on literature; emphasis will be on the contrast between the Republican and Imperial periods. Some reading will be in Latin; most will be in English. Offered only by individualized instruction.

LATN 362 Latin Conversation and Composition 3c-0l-3sh
Aims at the ability to speak Latin on a conversational level and to write grammatically correct Latin prose. Offered only by individualized instruction.

LATN 371 Survey of Latin Literature I 3c-0l-3sh
Comprehensive view of Latin literature from Ennius through the Augustan Age. Offered only by individualized instruction.

LATN 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

LATN 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
An opportunity to engage in an in-depth analysis of some topic dealing with the Latin language and culture through consultation with a faculty member. Approval is based on academic appropriateness and availability of resources.

LBST Liberal Studies

Liberal Studies Program
Academic Affairs Division

LBST 499 Senior Synthesis 3c-0l-3sh
Prerequisite: 73sh or more earned
Helps students understand and handle complex intellectual and social issues from multiple perspectives. A selection of topics, available each semester and summer session, is announced and described in the undergraduate course schedule. Students should schedule the course during the senior year or at least no earlier than the last half of the junior year. In order to broaden their experiences, students are encouraged to enroll in synthesis sections taught by instructors outside of the students' major fields.

LIBR Library

The University Libraries
Academic Affairs Division

LIBR 151 Introduction to Library Resources var-1sh
A lecture/laboratory course (fourteen one-hour classes) which provides an introduction to the resources of a university library, how those resources are organized, and how to use those resources effectively.

LIBR 201 Internet and Multimedia 3c-0l-3sh
Prerequisite: BTED/COSC/IFMG 101 or prior exposure to word processing and electronic mail
The major focus will be on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. This information literacy course is designed for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students will learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BTED/CM/COSC/IFMG/LIBR 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

LIBR 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

LIBR 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

LRNC Learning Center

The Learning Center
Student Affairs Division

LRNC 070 Reading Skills for College Study 3c-0l-3sh
Designed to assist students in the development of college-level reading skills with emphasis on textbook reading. Includes literal and critical comprehension skills, vocabulary development, and reading efficiency. Carries institutional, nondegree credit, and attendance is required.

LRNC 075 Reading and Study Skills Applications 1c-0l-1sh
Prerequisite: LRNC permission
Assists students in the applications of college-level reading and study skills to content-area coursework. Intended for freshman students in poor academic standing who need additional and individualized guidance in the transfer of learning strategies into day-to-day reading and coursework. Students will participate in small-group instruction, as well as individual appointments with the instructor. Carries institutional, nondegree credit, and attendance is required.

LRNC 090 Introduction to College Math I 3c-0l-3sh
Prerequisite: A student may not register for this course after successfully completing any course offered by the Mathematics department without the written approval of the Learning Center director
Reviews basic computational skills and their applications. Includes operations with whole numbers, decimals, and fractions; the concepts of ratios, proportions, and percents; basic geometric principles; and an introduction to algebra. Carries institutional, nondegree credit, and attendance is required.

LRNC 095 Introduction to College Math II 3c-0l-3sh
Prerequisite: A student may not register for this course after successfully completing any course offered by the Mathematics department, without written approval of the Learning Center director
Introduces beginning algebraic concepts, including signed numbers; rules and properties of equations; exponents; polynomials; factoring; algebraic fractions; graphs and linear equations, inequalities, and radical expressions. Carries institutional, nondegree credit, and attendance is required.

LRNC 150 Educational Planning 1c-0l-1sh
Introduces students to the system of higher education and to skills that promote effective educational planning and decision making. Includes the topics of history and purposes of higher education and its changing curricula; models for, and variables to consider in, decision making, goal setting, and educational planning. Note: Certain sections will be restricted to specific enrollment groups. (Offered as ED 150 prior to 1997-98)

LRNC 160 Learning Strategies 1c-0l-1sh
Assists students to develop and use effective and efficient study strategies on a consistent basis. Students will examine their academic goals and implement study strategies to help achieve those goals. Includes the topics of goal setting and self-monitoring, learning styles, test preparation and test taking, lecture and textbook note taking, time management and concentration, and general strategies for learning. Students will be required to give evidence of application of the study strategies to other courses in which they are currently enrolled. Active participation in class meetings is expected. Note: Certain sections will be restricted to specific enrollment groups. (Offered as ED 160 prior to 1997-98)

LRNC 170 Career Exploration 1c-0l-1sh
Introduces students to the theoretical and practical framework with which to explore careers compatible with overall academic skills, aptitudes, and life goals. Students will examine the world of work, assess their interests and abilities, and make realistic decisions on academic majors and careers. Notes: (1) Certain sections of this course will be restricted to specific enrollment groups. (2) Offered as ED 170 prior to 1997-98. (3) Course is cross-listed as ADVT 170. These courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

LRNC 201 Vocabulary Expansion 2c-0l-2sh
Students will acquire an enriched vocabulary through learning and applying knowledge of 168 Latin and Greek word parts and mastering the meanings and the use of 100 mature words based on some of those word parts. Primary emphasis is on developing the reading vocabulary, but attention is also given to students' writing, listening, and speaking vocabularies.

MATH Mathematics

Department of Mathematics
College of Natural Sciences and Mathematics

MATH 100 Intermediate Algebra 3c-0l-3sh
Note: May not take MATH 100 after successfully completing MATH 105 or 110 or a calculus course without the written approval of the Mathematics department chairperson.
Basic course in algebra including factoring, exponents and radicals, systems of linear equations, complex fractions, and inequalities. Designed for those students who lack the basic algebraic skills required in MATH 105 or 110. Will not meet Liberal Studies math requirements.

MATH 101 Foundations of Mathematics 3c-0l-3sh
Introduces logic and mathematical way of analyzing problems; develops an appreciation for nature, breadth, and power of mathematics and its role in a technological society; introduces useful mathematics or mathematics related to student interest. Possible topics include logic, problem solving, number theory, linear programming, probability, statistics, intuitive calculus, introduction to computers, mathematics of finance, game theory.

MATH 105 College Algebra 4c-0l-4sh
Prerequisite: MATH 100 or equivalent high school preparation
Note: May not take MATH 105 after successfully completing a calculus course or MATH 110 without the written approval of the Mathematics department chairperson.
Prepares students for the study of calculus for business, natural, and social sciences. Topics include a detailed study of polynomial, exponential, and logarithmic functions.

MATH 110 Elementary Functions 3c-0l-3sh
Note: May not take MATH 110 after successfully completing a calculus course without the written approval of the Mathematics department chairperson.
For students not prepared to begin the study of calculus; topics include polynomial, exponential, logarithmic, and trigonometric functions.

MATH 115 Applied Mathematics for Business 1c-0l-4sh
Prerequisites: MATH 105 or appropriate Placement Test score or permission of the Mathematics department chairperson
Note: A student may not take MATH 115 after successfully completing a calculus course without the written approval of the Mathematics department chairperson.
Offers a review of elementary functions including logarithmic and exponential functions. Business majors are introduced to the mathematics of finance and central ideas of the calculus, including limit, derivative, and integral. Applications to business and economics are emphasized.

MATH 117 Principles of Mathematics 3c-0l-3sh
An introduction to the nature of mathematics, designed specifically as a first course for mathematics education majors to experience several facets of mathematics including deduction, induction, problem solving, discrete mathematics, and theory of equations. Enrollment open to Secondary Mathematics Education majors only.

MATH 121 Calculus I for Business, Natural, and Social Sciences 4c-0l-4sh
Note: May not take MATH 121 after successfully completing another calculus course without the written permission of the Mathematics department chairperson.
Prerequisite: MATH 105 or 110 or equivalent high school preparation
Introduces non-Math major to analytic geometry, elementary functions (including logarithmic and exponential functions), central ideas of the calculus (limit, derivative, and integral), applications of derivatives to business, social, and natural sciences.

MATH 122 Calculus II for Business, Natural, and Social Sciences 4c-0l-4sh
Applications of integrals to business, natural, and social sciences, functions of several variables, trigonometric functions, sequences and series, numerical methods, differential equations.

MATH 123 Calculus I for Physics, Chemistry, and Mathematics 4c-0l-4sh
Prerequisites: High school algebra, geometry, and trigonometry
Functions, limits, continuity, derivatives, application of the derivative, integral, and applications of the integral. (Trigonometric and inverse trigonometric functions are included throughout the course.)

MATH 124 Calculus II for Physics, Chemistry, and Mathematics 4c-0l-4sh
Logarithmic and exponential functions, techniques of integration, sequences and series, differential calculus of functions of several variables, multiple integrals, line integrals, surface integrals, differential equations with application to physical problems.

MATH 151 Elements of Mathematics I 3c-0l-3sh
Topics included are sets, concepts of logic, mathematical systems, systems of numeration, developing the set of integers, rational numbers, and real numbers.

MATH 152 Elements of Mathematics II 3c-0l-3sh
Prerequisite: MATH 151
Topics included are sentences in one variable, sentences in two variables, nonmetric geometry, metric geometry, coordinate geometry, introduction to statistics and probability, computers, and calculators.

MATH 171 Introduction to Linear Algebra 3c-0l-3sh
An introduction to vector spaces, linear transformations, determinants, and matrix algebra. Topics are presented in a direct and intuitive approach.

MATH 214 Probability and Statistics for Business Majors 3c-0l-3sh
Designed to study the methods of describing data, probability theory, discrete and continuous random variables, sampling distributions, estimation and tests of hypothesis for means, proportions and variance, and simple linear regression and correlation.

MATH 216 Probability and Statistics for Natural Sciences 4c-0l-4sh
Prerequisite: MATH 121 or 123
Frequency distributions, measures of central tendency and variation, probability, probability distributions, sampling distributions. Hypothesis testing for means, variances, proportions. Correlation and prediction, regression, analysis of variance, and nonparametric statistics. The emphasis will be on applications.

MATH 217 Probability and Statistics 3c-0l-3sh
(For non-Math majors) Frequency distributions, measures of central tendency, variation, elementary probability, sampling, estimation, testing hypotheses, correlation, and regression; emphasis on applications as opposed to theoretical development of topics.

MATH 219 Discrete Mathematics 3c-0l-3sh
Prerequisites: COSC 110 and MATH 123, 127, or 122
Topics include set algebra, mappings, relations, semigroups, groups, directed and undirected graphs, Boolean algebra, and propositional logic, with examples and applications of these to various areas of computer science. An emphasis is placed on developing an intuitive understanding of basic structures rather than formal theories and influence of these topics on theory and practice of computing.

MATH 241 Differential Equations 3c-0l-3sh
Prerequisites: MATH 122, 124, or 227
An emphasis is placed on techniques of solution and elementary physical applications. A thorough study is made of differential equations classified as order one-degree one, linear, and nonhomogeneous. Solution techniques involving reduction of order techniques, the differential operator, and infinite series are introduced.

MATH 271 Introduction to Mathematical Proofs I 3c-0l-3sh
Prerequisites: MATH 123 and 171
Gives student basic ideas of necessary to prove results in mathematics. Includes but is not limited to logic of mathematics, basic methods of proof, algebra of sets, equivalence relations and partitions of sets, functions, and mathematical induction.

MATH 272 Introduction to Mathematical Proofs II 3c-0l-3sh
Prerequisites: MATH 124 and 271 with a grade of C or better
A further study of the basic ideas of contemporary mathematics. Topics include but are not limited to mathematical induction, cardinality of sets, relations, methods of proof in number theory, analysis, and algebra.

MATH 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

MATH 317 Probability and Statistics for Elementary and Middle School Teachers 3c-0l-3sh
Prerequisites: MATH 152, Elementary Education concentration
Introduces students to elementary concepts of probability and statistics which will enable them to analyze data, make predictions, and determine which concepts may be used with children.

MATH 320 Mathematics for Early Childhood 3c-0l-3sh
Prerequisites: MATH 151, Early Childhood major
Studies child-centered, activity-oriented mathematics programs for early childhood education. Focuses on helping children develop understanding and insight into basic concepts of mathematics through the use of manipulative materials. Topics include pre-number activities, number activities, numeration, operations on whole numbers, estimation, rational numbers, geometry, measurement, probability, statistics, and problem solving.

MATH 342 Advanced Mathematics for Applications 4c-0l-4sh
Prerequisite: MATH 241
Deals with the application of mathematics to problems of science. An emphasis is placed on the three phases of such an application and on the development of skills necessary to carry out each step: (a) translation of the given physical information to a mathematical model; (b) treatment of the model by mathematical methods; (c) interpretation of the mathematical result in physical terms. Topics included are vector calculus, integral theorems, Fourier series, partial differential equations, and the Laplace transformation.

MATH 350 History of Mathematics 3c-0l-3sh
Prerequisite: MATH 122 or 124 or permission of instructor
Development of the central concepts of mathematics from ancient times up to the development of calculus in the seventeenth century. Mathematical concepts will be placed in historical perspective. The use of the history of mathematics as a pedagogical tool and its relationship to other sciences will be addressed.

MATH 353 Theory of Numbers 3c-0l-3sh
Prerequisite: MATH 271 with a grade of C or better
Divisibility, congruences, primitive roots, number theoretic functions, diophantine equations, continued fractions, quadratic residues.

MATH 355 Foundations of Geometry I 3c-0l-3sh
Prerequisites: MATH 171, 271 with a grade of C or better
Studies various groups of transformations and geometries associated with these groups in the Euclidean plane. The Euclidean Similarity and affine and projective groups of transformations are studied.

MATH 363 Mathematical Statistics I 3c-0l-3sh
Prerequisites: MATH 122 or 124; MATH 216
Probability theory necessary for an understanding of mathematical statistics is developed. Applications of set theory to models, combinations and permutations, binomial, Poisson and normal distributions, expected values, and moment generating functions.

MATH 364 Mathematical Statistics II 3c-0l-3sh
Prerequisite: MATH 363
Multivariate distributions, change of variable technique, chi-square distribution, estimation, confidence intervals, hypothesis testing, contingency tables, goodness of fit. Practical applications are used to aid in the development.

MATH 366 Preparation for Actuarial Examinations 1c-0l-1sh
Prerequisites: MATH 171 and calculus sequence
Provides an introduction to the actuarial profession and helps the student prepare for the first actuarial examinations. The examination preparation consists of studying sample actuarial examinations and related material. The student is required to take the actuarial examination. The student should be aware that for most students, considerable study beyond the requirements of this 1sh course will be required in order to pass the actuarial examinations.

MATH 371 Linear Algebra 3c-0l-3sh
Prerequisites: MATH 171, 271 with a C or better grade
Vector spaces and linear transformations are studied in a theoretical setting. Also, canonical forms and multilinear algebra are studied.

MATH 417 Statistical Applications 3c-0l-3sh
Prerequisites: MATH 214, 216, or 217 (for non-Math majors)
Using computer programs, a wide array of statistical procedures for educational research workers will be explored. Basic concepts of statistical inference and prediction will be reviewed, including regression analysis and prediction, hypothesis testing, analysis of variance and covariance, and partial and multiple correlation. The emphasis is on use of the computer and interpretation of computer printouts, along with understanding techniques employed. No computer knowledge is necessary.

MATH 418 Sampling Survey Theory and Its Application 3c-0l-3sh
Prerequisites: (For non-Math majors) MATH 214, 216, or 217
Directed to the student who is or will be doing quantitative research, commissioning large-scale surveys, and evaluating the results. Sampling techniques and statistical principles underlying their use will be introduced. Consideration to the practical problems associated with implementation.

MATH 420 Patterns and Functions for Elementary and Middle School Teachers 3c-0l-3sh
Prerequisites: MATH 152; Elementary Education concentration
Examines the function concept as applied to elementary real number functions and graphing techniques for these functions. Topics include real number functions such as absolute value, step, linear, quadratic, and other polynomial functions, trigonometric and other periodic functions, exponential logarithmic functions, and all other inverse functions. Students will examine curricular materials that develop function concepts in Grades K-8.

MATH 421 Advanced Calculus I 3c-0l-3sh
Prerequisites: MATH 124 and 272 with a grade of C or better
A study of set theory, real number system, functions topology of Cartesian space, sequences, convergence and uniform convergence, continuity, and uniform continuity.

MATH 422 Advanced Calculus II 3c-0l-3sh
Prerequisite: MATH 421
Includes the study of convergence sequences in Rn, global properties of continuity, uniform continuity, differentiation of Rn, Riemann integrals, and infinite series.

MATH 423-424 Complex Variable I and II each 3c-0l-3sh
Prerequisite: MATH 124 or 227
An introduction to the theory of functions of a complex variable; topics included are elementary functions, analytic functions, conformal mapping, integration, series, and application.

MATH 425 Applied Mathematical Analysis I 3c-0l-3sh
Prerequisite: Calculus sequence, introductory linear algebra, or permission of instructor
Provides the necessary background for an understanding of mathematical programming, proofs of convergence of algorithms, convexity, and factorable functions. Also develops necessary concepts in matrix theory which are required to develop efficient algorithms to solve linear and nonlinear programming models.

MATH 427 Introduction to Topology 3c-0l-3sh
Prerequisite: MATH 272 with a grade of C or better
A study of sets, functions, continuity, compactness, the separation of axioms, and metric spaces; application of topology to analysis is demonstrated.

MATH 445 Programming Models in Operations Research 3c-0l-3sh
Prerequisites: Two-semester sequence of calculus and MATH 171 or permission of instructor
Development of deterministic mathematical models for managerial and social sciences with relevant computational techniques.

MATH 446 Probabilistic Models in Operations Research 3c-0l-3sh
Prerequisites: Two-semester sequence of calculus, MATH 363
Development of probabilistic mathematical models for managerial and social sciences with relevant computational techniques.

MATH 447 Simulation Models 3c-0l-3sh
Prerequisites: Completion of the calculus sequence; background in statistics and probability, and familiarity with concepts of programming (knowledge of a particular programming language not required)
Considers the types of models that are basic to any simulation and methods for building and using such models. It includes discrete and continuous system simulations, their applications, and an introduction to SLAM II (Simulation Language for Alternative Modeling).

MATH 451 Numerical Methods for Supercomputers 3c-0l-3sh
Prerequisites: MATH 121 and 122, or MATH 123 or 127, MATH 171, COSC 250
Supercomputers make use of special computer architectures—vector and parallel processors—in order to achieve the fastest processing speed currently available. Students will be introduced to these features and will learn how numerical algorithms can be constructed to exploit supercomputers' capabilities. Students will gain practical experience in programming for the Cray, YMP, in incorporating existing scientific software packages into user-written programs, in submitting remote jobs to the Pittsburgh Supercomputer Center, and in producing animated graphical output to summarize the typically large volume of output data generated by large scientific programs. (Also offered as COSC 451; may not register for duplicate credit)

MATH 452 Seminar in Teaching Algebra var-1-4sh
MATH 453 Seminar in Teaching Geometry var-1-4sh
MATH 454 Seminar in Teaching General Mathematics var-1-4sh
Designed for pre-student teacher. Students in each class will gain insights into the problems in teaching each topic and become aware of the materials available and methods of instruction geared to the special type of student. Education majors only.

MATH 455 Seminar in Teaching Probability and Statistics 1c-0l-1sh
Designed for the pre-student teacher. Students in each class will gain insights into the problems in teaching each topic and become aware of the materials available and methods of instruction geared to the secondary mathematics student. Education majors only.

MATH 456 Geometry for Elementary and Middle School Teachers 3c-0l-3sh
Prerequisites: MATH 152, Elementary Education concentration
Students become acquainted with an informal, intuitive approach to geometry. Activities and materials for teaching geometrical concepts to children are an integral part of the course.

MATH 457 Number Theory for Elementary and Middle School Teachers 3c-0l-3sh
Prerequisites: MATH 152, Elementary Education concentration
An introduction to topics of elementary number theory including divisibility, prime numbers, factorization, modular arithmetic, problem solving, and place of number theory in the elementary school curriculum. Students will examine many number theory activities which can help to strengthen skills with basic facts in an interesting, nonroutine setting.

MATH 458 Logic and Logical Games for Elementary and Middle School Teachers 3c-0l-3sh
Prerequisites: MATH 152, Elementary Education concentration
An introduction to some of the basic ideas, terminology, and notation of mathematical logic and Boolean algebra as well as games of strategy that involve logic. In addition, an investigation of how logic is taught and used in various programs for the elementary school.

MATH 459 Technology in Elementary and Middle School Mathematics Instruction 3c-0l-3sh
Prerequisites: MATH 152, Elementary Education concentration
Intended to develop the knowledge, skills, and perspectives required for using educational technology in teaching mathematics at the elementary and middle school levels. Participants will have hands-on experiences with technology.

MATH 460 Technology in Mathematics Instruction 3c-0l-3sh
Prerequisite: COSC 205
Designed to provide preservice mathematics teachers with expertise in instructional technology for teaching mathematics at the secondary level. Pedagogical and content knowledge are integrated within the context of technology and current reforms.

MATH 465 Topics in Statistics 3c-0l-3sh
Prerequisite: MATH 364
Correlation and regression from applied and theoretical points of view, bivariate and multivariate normal distribution, analysis of variance, nonparametric methods. Practical problems involving statistical techniques and use of computer statistical packages. Knowledge of computer programming is not required.

MATH 471 Basic Concepts of Algebra 3c-0l-3sh
Prerequisites: MATH 152, Elementary Education concentration
Concepts of basic algebraic structures such as group, ring, integral domain, field, and vector space are studied within the context of the mathematical maturity of the student. Other topics include relations and functions, polynomials and polynomial equations, systems of equations, and inequalities. Consideration given to development of these concepts in the mathematics curriculum.

MATH 476 Abstract Algebra I 3c-0l-3sh
Prerequisite: MATH 272 with a grade of C or better
Development of theory of integral domains, fields, rings, and groups; designed to develop student's power to think for himself or herself and to improve ability to construct formal proofs.

MATH 477 Abstract Algebra II 3c-0l-3sh
Prerequisite: MATH 476
Designed to have student continue study of algebra by use of axiomatic method; Euclidean domains; polynomial domains and extension fields included; interrelationships between these structures and simpler structures, particularly groups and rings, are developed as in study of Galois group of a polynomial and in an introduction to Galois theory.

MATH 480 Senior Seminar 1c-0l-1sh
Prerequisite: Senior standing in Mathematics major
To assess the effectiveness of the mathematics curriculum and to provide mathematics majors with a culminating mathematical experience.

MATH 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

MATH 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

MATH 490 Independent Study var-1-3sh

MATH 493 Internship in Mathematics var-3-12sh
Prerequisites: Completion of core curriculum, completion of application
Positions with participating companies or agencies provide students with experience in mathematics-related work under the supervision of the agencies and faculty. Requirements include one to three on-site consultations, two university consultations, completion of progress reports, and presentation of final cumulative paper. Internship credit may not be used in fulfilling math major course requirements.

MEDT Medical Technology

Department of Nursing and Allied Health Professions
College of Health and Human Services

MEDT 494 Clinical Microbiology var-6-10sh
Identification and clinical pathology of bacteria, fungi, viruses, and parasites. Techniques to isolate, stain, culture, and determine antimicrobial susceptibility. Instrumentation; quality control.

MEDT 495 Clinical Chemistry var-7-10sh
Enzymology, endocrinology, biochemistry of lipids, carbohydrates, and proteins; metabolism of nitrogenous end products; physiology and metabolism of fluids and electrolytes; and toxicology as related to the body and diseases. The technical procedures include colorimetry, spectrophometry, electrophoresis, chromatography, automation, and quality control.

MEDT 496 Clinical Hematology/Coagulation var-4-7sh
The composition and function of blood; diseases related to blood disorders; the role of platelets and coagulation. Manual and automated techniques of diagnostic tests for abnormalities.

MEDT 497 Clinical Immunohematology var-3-6sh
Blood antigens, antibodies, crossmatching, hemolytic diseases, and related diagnostic tests. An in-depth study of blood donor service and its many facets such as transfusions, medico-legal aspects, etc.

MEDT 498 Clinical Immunology/Serology var-2-4sh
Immune response, immunoglobulins, autoimmunity, and complement and related tests and diseases. Survey and demonstration of serological diagnostic tests.

MEDT 499 Clinical Seminar var-0-6sh
Other courses which are not included in the above (such as orientation, laboratory management, education, clinical microscopy) and/or are unique to the individual hospital program.

MGMT Management

Department of Management
Eberly College of Business and Information Technology

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course. Business majors (except those majoring in Business Education) who have not achieved Junior Standing are normally not permitted to enroll in 300- or 400-level courses.

MGMT 234 Introduction to Quality Control 3c-0l-3sh
Prerequisite: Must be enrolled in either the Associate in Applied Science in Electro-Optics or the Associate of Science in Electro-Optics
Introduces the student to the principles, philosophies, and practices of Total Quality Management (TQM) and the techniques of Statistical Quality Control including fundamentals of probability and statistics, control charts for variables and attributes, acceptance sampling, and reliability concepts.

MGMT 275 Introduction to Entrepreneurship 3c-0l-3sh
Prerequisites: ACCT 201, ECON 121, sophomore status, only for nonmajors, permission by department
Entrepreneurship is defined, common myths are discussed, and characteristics of entrepreneurs are identified. Basic characteristics of entrepreneurs are reviewed. Includes topics such as the psychology of entrepreneurship; economic and social aspects of entrepreneurship; history; techniques of purchasing a company; new venture initiation; and risk taking.

MGMT 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

MGMT 300 Human Resource Management 3c-0l-3sh
Prerequisite: PSYC 101
Designed to recognize and evaluate the application of behavioral science approaches in the study of human resource management. Topics include recruiting and selection, training, management development, performance evaluation, communications, wage and benefit programs, and management-labor relations.

MGMT 305 Organizational Staffing 3c-0l-3sh
Prerequisites: MATH 214, MGMT 300
Focuses on the theoretical, technical, administrative, and legal issues involved in the recruitment, selection, placement, and promotion of individuals by organizations. Topics covered include human resource planning, job analysis, job description and specifications, recruitment, selection process, equal employment opportunity and affirmative action, reliability and validity of selection instruments and techniques, and contemporary issues in selection.

MGMT 310 Principles of Management 3c-0l-3sh
Provides the student with an in-depth identification and understanding of the relevant theories, concepts, and principles underlying the management function.

MGMT 311 Human Behavior in Organizations 3c-0l-3sh
Prerequisite: PSYC 101
Human problems of management. Basic ideas and theories from the behavioral sciences as they apply to human behavior in organizations are presented. Management solutions to problems resulting from individual-organization interaction are emphasized.

MGMT 325 Small Business Management 3c-0l-3sh
Prerequisites: MGMT 275, MGMT 310, MKTG 320
A survey course emphasizing those aspects of small business management not covered elsewhere in the student's program. Key topics include Real Estate, Site Selection, and Facilities Management; Purchasing Management, Vendor Relations, and Inventory Systems; Plant Security, Loss Control, Risk and Insurance Management; Human Resources Management, Employee Benefits, Motivation, and Leadership; Small Business Market Research, Customer Services Management, and Pricing. A review of other elements of the small firm's milieu is included as a necessary contextual element (e.g., planning, accounting, financing, law).

MGMT 330 Production and Operations Management 3c-0l-3sh
Prerequisites: MATH 121, 214, junior status, Eberly College of Business and Information Technology or approved major
A study of the process of converting an organization's inputs into outputs whether in goods-producing or service industries. Provides an overview of concepts, tools, and techniques used in management of production and operations function in organizations.

MGMT 334 Quality Management 3c-0l-3sh
Prerequisite: MGMT 330
Emphasizes the philosophy that quality is an organizationwide phenomenon that influences every aspect of its operations. An overview of current quality management philosophies and tools and techniques for managing quality in manufacturing and services.

MGMT 350 International Business 3c-0l-3sh
Prerequisite: MGMT 310
A study of the international dimensions of business and the critical environmental and organizational factors that affect managerial approaches in the international arena. Focuses upon the management problems stemming from the movement of goods, human resources, technology, finance, or ownership across international boundaries. (Also offered as MKTG 350)

MGMT 351 International Management 3c-0l-3sh
Prerequisite: MGMT 310
Provides the student with a general foundation on managing multinational corporations (MNCs). Examines the macro- and structural-level issues of MNCs. Focuses on planning, organization structure, managerial decision making, and human resource management in global structures and differences between MNCs and domestic organizations.

MGMT 400 Compensation Management 3c-0l-3sh
Prerequisite: MGMT 300
Studies the policies and programs that help managers design and administer compensation systems for private and public sector enterprises. Includes motivation theories and practice designing of compensation systems.

MGMT 401 Management Development and Training 3c-0l-3sh
Prerequisites: MGMT 300, 310
Principles, problems, and procedures in planning, organizing, directing, and controlling all aspects of training and development programs in a business enterprise. Methods of improving and development of managerial skills are emphasized.

MGMT 402 Seminar in Human Resource Management 3c-0l-3sh
Prerequisites: MGMT 300, graduating senior
An integrative course in Human Resource Management. Considers current issues in human resource management literature and contemporary topics in the human resource management field using case studies.

MGMT 403 Small Business Planning 3c-0l-3sh
Prerequisites: ACCT 300, IFED/COSC/IFMG 101, MGMT 325
Integrates the content of much of the business core and relates it to the business planning for small businesses and entrepreneurial efforts. The student will be introduced to the concepts which will support the development of an effective business plan.

MGMT 406 Human Resources Management Research 3c-0l-3sh
Prerequisites: MGMT 300, QBUS 215
The study of the nature of research questions, research methods, research design, collection, analysis, and interpretation of data. Focuses on design, development, implementation, and evaluation of Human Resources Management programs. Applications in employee selection, performance measurement, work attitudes and motivation, employee training, and development areas.

MGMT 428 Seminar in Management 3c-0l-3sh
Prerequisite: MGMT 310
An integrative course in management. Considers current literature in the field and contemporary issues in management using case studies.

MGMT 432 Business and Society 3c-0l-3sh
An overview of the interactions between business and the larger social system in which it operates. Considers the problem, solutions, and future directions of societal issues and their relationships to the business environment. Topics discussed include consumerism, the morality of advertising, self-regulation, pollution and ecology, overpopulation, government regulation, and the social and ethical responsibilities of business and industry. (Also offered as MKTG 432; may not be taken for duplicate credit)

MGMT 437 Operations Management System 3c-0l-3sh
Prerequisite: MGMT 330
A theoretical and practical understanding of manufacturing and service planning and control, including systems modeling, purchasing and sourcing, information and control including MPS, MRP, and MRP-II, scheduling, etc. Manufacturing and service technologies and trends are also emphasized. Computer applications are used for understanding the interrelationships between various components of operations system.

MGMT 438 Seminar in Operations Management 3c-0l-3sh
Prerequisites: MGMT 330, senior standing
An integrative course in operations management. Considers and analyzes the current literature and contemporary topics in the area of providing service and producing goods. Case studies and field trips are used to provide students with a comprehensive knowledge of the theories, current practices, and trends in several topical areas of operations management. Students will learn to present their findings and analyses in a professionally written format.

MGMT 452 Comparative Management 3c-0l-3sh
Prerequisite: MGMT 350
The study of the similarities and differences among managers, management practices, and organizations in different cultures. A variety of comparative management systems, models, and theories are presented, and research findings are examined.

MGMT 454 International Competitiveness 3c-3l-3sh
Prerequisite: MGMT 350
The study of the most important challenges that face nations and firms alike in gaining or restoring competitiveness. Focuses on factors that determine the success of nations and their firms in highly dynamic world markets. Various theories, models, and cases dealing with competitive advantage are examined.

MGMT 459 Seminar in International Management 3c-0l-3sh
Prerequisites: MGMT 454, senior standing
An analysis of recent literature and developments related to global business issues such as strategic alliances, human resource management in global environments, global assignments, Japanese business system, multinational corporations in the world economy.

MGMT 481 Special Topics in Management var-1-3sh
Covers advanced, innovative, or exploratory topics and disciplines within management. Specific content items developed by instructor. Credits may be applied to either required (by permission of department chairperson) or free electives in a student's program.

MGMT 482 Independent Study var-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member. Approval is based on academic appropriateness and availability of resources.

MGMT 492 Small Business/Entrepreneurship Internship var-3-12sh
Prerequisites: MGMT 403, permission of department chairperson, 2.75 cumulative GPA, all other requirements of the Eberly College of Business and Information Technology
Involves practical entrepreneurial experience of on-site consulting with small business firms. Students will generally work for a semester on functionally related topics in accounting, finance, marketing, and MIS or on general topics such as business planning, forecasting, policy, and general management.

MGMT 493 Management Internship var-3-12sh
Practical experience to develop knowledge and skills in the application of theory to actual problems in a nonclassroom setting. A maximum of 3sh of internship in the student's major may be applied toward the management and human resource management major area elective requirements. Additional internship credit must be used as free electives only. Admission only by permission of the department chairperson and dean, Eberly College of Business and Information Technology.

MGMT 495 Business Policy 3c-0l-3sh
Prerequisites: Completion of all Business Core requirements or permission; graduating seniors
A capstone case analysis course designed to give the student practice in applying business theories to the solution of management problems. An analysis of how top management determines strategy and policy and influences the philosophy and character of the company. Develops in the student a general management viewpoint that integrates the various functions of the organization.

MKTG Marketing

Department of Marketing
Eberly College of Business and Information Technology

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course. Business majors (except those majoring in Business Education) who have not achieved Junior Standing are normally not permitted to enroll in 300- or 400-level courses.

MKTG 320 Principles of Marketing 3c-0l-3sh
Prerequisite: ECON 122
A study of those activities necessary to the design, pricing, promotion, and distribution of goods and services for use by organizations and ultimate consumers.

MKTG 321 Consumer Behavior 3c-0l-3sh
Prerequisites: MKTG 320 and PSYC 101
A survey of noteworthy contributions of behavioral science and research on consumer purchasing and decision-making process, with particular attention to formal and informal influence patterns.

MKTG 350 International Business 3c-0l-3sh
Prerequisite: MGMT 310
A study of the international dimensions of business and the critical environmental and organizational factors that affect managerial approaches in the international arena. Focuses upon the management problems stemming from the movement of goods, human resources, technology, finance, or ownership across international boundaries. (Also offered as MGMT 350)

MKTG 351 Self-Marketing 1c-0l-1sh
Prerequisite: Junior standing (as per semester hours earned)
The focus is on the development of both long-term and short-term self-marketing plans and self-marketing packages. Theories of managerial marketing, professional selling, market research, and advertising applied to self-marketing in order to prepare students to seek internship experience.

MKTG 420 Marketing Management 3c-0l-3sh
Prerequisites: MKTG 320 and 321
An analysis of marketing and operational problems and policies involved in planning, organizing, coordinating, and controlling a total marketing program.

MKTG 421 Marketing Research 3c-0l-3sh
Prerequisites: MKTG 320 and QBUS 215
Nature, methods, analysis, and application of present-day marketing research techniques utilized in the solution of practical marketing problems.

MKTG 422 Seminar in Marketing 3c-0l-3sh
Prerequisites: MKTG 420 and 421, graduating senior
A terminal course designed for majors in marketing; considers current literature in the field, case problems pertaining to the total marketing effort, and current problems of actual companies.

MKTG 430 International Marketing 3c-0l-3sh
Prerequisite: MKTG 320
International marketing and markets are analyzed. Special consideration is given to the significance of government regulations, organization structures of export and import enterprises, and credit policies.

MKTG 431 Industrial Marketing 3c-0l-3sh
Prerequisite: MKTG 420
Concerned with the major activities involved in the marketing of industrial goods and services, including the industrial marketing system, marketing information needs of the industrial firm, industrial marketing implementation and control, and channel, pricing, product, and promotional strategies for industrial goods.

MKTG 432 Business and Society 3c-0l-3sh
An overview of the interactions between business and the larger social system in which it operates. Considers the problems, solutions, and future directions of societal issues and their relationships to the business environment. Topics discussed include consumerism, the morality of advertising, self-regulation, pollution and ecology, overpopulation, government regulation, and the social and ethical responsibilities of business and industry. (Also offered as MGMT 432; may not be taken for duplicate credit)

MKTG 433 Advertising 3c-0l-3sh
Prerequisite: MKTG 320
An introduction to the principles, practices, and creations of advertising. Use of various media and legal, economic, social, and ethical aspects of advertising are also considered.

MKTG 434 Marketing Logistics 3c-0l-3sh
Prerequisites: Junior/senior standing, MKTG 320 and MGMT 330
The focus is on planning, organizing, and controlling the marketing logistics function. In addition to the acquisition and application of management science methods, students will integrate and apply previously gained knowledge to analyze and solve complex marketing logistics problems. Areas of major concentration include facility location, transportation, inventory management, and customer service.

MKTG 435 Professional Selling and Sales Management 3c-0l-3sh
Prerequisite: MKTG 320
Introduces students to the role and nature of modern personal selling in marketing. Theory and practice of personal selling process, sales planning, delivering sales presentations, and relationship marketing are emphasized. Basics of managing sales force including territory management, recruiting, training, and compensating sales force are also covered.

MKTG 436 Retail Management 3c-0l-3sh
Prerequisite: MKTG 320
Introduces students to all facets of retailing including the history of retailing, retail theories, and decision-making in retailing framework.

MKTG 437 Services Marketing 3c-0l-3sh
Prerequisite: MKTG 320
Focuses on current theories and applications of marketing techniques in the fast-growing area of services in the business, government, and nonprofit sectors. The emphasis is placed on characteristics of services and their marketing implications and formulation and implementation of marketing strategies for service firms.

MKTG 438 Relationship Marketing c-0l-3sh
Prerequisite: MKTG 320
Relationship marketing entails performing marketing activities directed toward establishing, developing, and maintaining successful long-term relational exchanges. Covers the theory and practice of relationship marketing.

MKTG 481 Special Topics var-l-3sh
Prerequisite: As appropriate to course content
Covers advanced, innovative, or exploratory topics and disciplines within marketing. Specific content items developed by instructor. Credits may be applied to either required (by permission of departmental chairperson) or free electives in a student's program. Special topics numbered 481 are primarily for upper-level undergraduate students.

MKTG 482 Independent Study var-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office. Approval is based on academic appropriateness and availability of resources.
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

MKTG 493 Marketing Internship var-3-12sh
Practical experience in the marketing field to develop knowledge and experience in the practical application of theory to actual problems in a nonclassroom situation. A maximum of 3sh of internship in the student's major may be applied toward the marketing major-area elective requirements. Additional internship credit must be used as free electives only. Admission only by permission of the department chairperson and the dean, Eberly College of Business and Information Technology.

MLSC Military Science

Department of Military Science
Academic Affairs Division

MLSC 101 Introduction to Military Science 2c-1l-2sh
A study of the organization of the United States Army and the role of the military in today's society. The emphasis is on the customs and traditions of the service, the Total Army concept, and the fundamentals of leadership. Included is instruction in basic military skills, land navigation, and personal nutrition and fitness. Also, see Leadership Laboratory.

MLSC 102 Fundamentals of Military Science 2c-1l-2sh
The study of the basic knowledge regarding military service and the profession of arms. The emphasis is on basic military skills, first aid, and the development of leadership abilities through practical exercises. Included is instruction on offensive and defensive tactics, the Army writing style, and military briefings. Also, see Leadership Laboratory.

MLSC 203 Fundamentals of Tactical Operations, Techniques of Leadership, and Weapons Characteristics 2c-1l-2sh
Organization, techniques, resources, and capabilities involved in conducting small-unit tactical operations. The emphasis is on leadership, organization, and management techniques needed to cause a group of people to accomplish specific objectives. Characteristics of military weapons systems are taught. Students serve as leaders in Leadership Labs.

MLSC 204 National Security and Fundamentals of Military Topography 2c-1l-2sh
The study of national security concepts, policies, and the national decision-making process with emphasis on national resources, national will, and economic factors. Included will be a study of nuclear and conventional response options. Fundamentals of military topography including the use of military maps to determine topographic features, to conduct land navigation, and to perform terrain analysis will be covered. Also, see Leadership Laboratory.

MLSC 305 Fundamentals of Leadership and Modern Learning/Teaching Relationship 3c-1l-3sh
A study in practical application of principles of leadership/management as applied in classroom and field to include case studies in psychological, physiological, and sociological factors which affect human behavior; individual and group solution of leadership problems common to small units. Also, see Leadership Laboratory.

MLSC 306 Study of Advance Leader Planning and Execution of Modern Combat Operations 3c-1l-3sh
An analysis of leader's role in directing and coordinating efforts of individuals and small units in execution of offensive and defensive tactical missions, to include command and control systems, the military team, and communications techniques. Also, see Leadership Laboratory.

MLSC 407 Management of the Military Complex to Include Fundamentals of Military and International Law 3c-1l-3sh
The study of the various managerial elements needed to effectively control a military organization and the techniques used to accomplish these functions. Studies in military law and international law prepare the students for their legal responsibilities. Also, see Leadership Laboratory.

MLSC 408 Seminar in Military Analysis and Management 3c-1l-3sh
Contemporary analysis of use of military in world affairs to include importance of strategic mobility and neutralization of insurgent movements. Selected management problems and situations will be presented as they relate to military

justice, administration, and obligation and responsibilities of an officer. Also, see Leadership Laboratory.

Leadership Laboratory (one afternoon per week) var-0sh
A practical experience designed for the attainment and application of leadership principles. Concurrently scheduled in conjunction with all Military Science courses, it provides for practical challenges in personal accomplishment, both physical and mental, and for development of team work and leadership.

Summer Camp
var-0sh
Students attend a six-week summer camp upon completion of the first year of the Advanced Course. Time at camp is devoted to practical application of principles and theories taught during the preceding school year. While at camp, each student receives lodging, subsistence, uniforms, medical care, reimbursement for travel, and pay in amount of one-half pay of second lieutenant per month.

MRSC Marine Science

Marine Science Consortium/Biology Department
College of Natural Sciences and Mathematics

MRSC 110 Introduction to Oceanography var-3sh
An introduction to physical, chemical, biological, and geological aspects of oceans and methods and techniques of oceanography. Lab emphasis placed on at-sea assignments.

MRSC 211 Field Methods in Oceanography var-3sh
Prerequisite: MRSC 110 or consent of instructor
A familiarization with dynamic marine environment involving use and application of oceanographic instruments and sampling devices.

MRSC 212 Navigation var-3sh
Prerequisite: Four years' high school math or equivalent or consent of the instructor
Covers navigation, i.e., the art and science of safely bringing a vessel from one position to another in a body of water. Course divided into (1) brief historical background; (2) navigation within sight of land, i.e., piloting; (3) navigation in the open sea, including electronic navigation methods.

MRSC 221 Marine Invertebrate Zoology var-3sh
Prerequisite: One year of biology or consent of instructor
A study of marine invertebrates with emphasis on development, reproduction, structure, function, and classification of selected marine organisms.

MRSC 241 Marine Biology var-3sh
Prerequisites: Botany and zoology or consent of instructor
A study of plant and animal life in marine environment with emphasis placed upon physical and chemical factors affecting biota.

MRSC 250 Management of Wetland Wildlife var-3sh
The ecology and management of wetland wildlife, particularly of freshwater marshes and saltwater marshes. Special emphasis on ecosystem approach.

MRSC 260 Marine Ecology var-3sh
Prerequisite: One year of biology or consent of instructor
A course in ecology of marine organisms.

MRSC 270 Scuba Diving var-3sh
Prerequisites: Swimming ability and good health. (A standard diving physical form will be mailed to students electing the course.)
Students who complete course will receive a National Association of Underwater Instructors Diver Certificate.

MRSC 280 Marine Field Biology var-3sh
An introduction to basic principles of ecology and natural history of selected plants and animals in terrestrial, freshwater, and marine environments. Suitable for non-Science majors.

MRSC 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

MRSC 331 Chemical Oceanography var-3sh
Prerequisites: MRSC 110 and one year of chemistry
Treatment of oceanic chemical phenomena by sampling and laboratory analysis techniques.

MRSC 342 Marine Botany var-3sh
In-the-field studies and laboratory analysis by instrumentation of marine and marine fringe plants in the Middle Atlantic Coast as exemplified by those found in the Cape Henlopen, Delaware, and Wallops Island, Virginia, areas.

MRSC 343 Marine Ichthyology var-3sh
Prerequisites: General Biology and/or consent of the instructor
A study of fishes. Specimens collected along Eastern Seaboard by students will be used to illustrate anatomy, physiology, and systematics of this major vertebrate group. Field collections will give student opportunity to observe relationships of these animals to the biotic and physical environment.

MRSC 344 Anatomy of Marine Chordates var-3sh
Prerequisites: 6sh of Biology including General Zoology
Designed to familiarize students with various aspects of marine chordates.

MRSC 345 Marine Ornithology var-3sh
Prerequisite: One year of biology or consent of the instructor
Introduces student to avian fauna of seacoast and enables comparison with inland species. In addition to field work providing visual and vocal identification, lecture material will include information on distribution, behavior, physiology, and anatomy of birds.

MRSC 362 Marine Geology var-3sh
Prerequisites: MRSC 110 and physical geology or consent of instructor
Studies of structural and sedimentary environments of continental shelf, slopes, and ocean basins and crustal structure of the earth and its relation to sedimentary record and geologic history of oceans.

MRSC 364 Physical Oceanography var-3sh
Prerequisites: MRSC 110, one year of physics, one semester of calculus, and permission of the instructor
Includes consideration of physical properties, mass and energy budgets, theory of distribution of variables; cause, nature, measurement, analysis, and prediction of tides, currents, and waves; and basic instrumentation in the field.

MRSC 420 Marine Micropalcontology var-3sh
Prerequisites: One year of geology and biology or consent of instructor
Deals with modern, living representatives of microorganisms important in fossil record with particular emphasis placed on taxonomy, morphology, evolution, and ecologic affinities of representative groups.

MRSC 431 Ecology of Marine Plankton var-3sh
Prerequisite: One year of biology
A study of phytoplankton and zooplankton in marine and brackish environments. Qualitative and quantitative comparisons made between the planktonic populations of various types of habitats in relation to primary and secondary productivity.

MRSC 159 Coastal Geomorphology var-3sh
Prerequisite: One year of geology
A study of coastal geomorphology with emphasis on Late Cenozoic and Pleistocene sea-level changes in response to worldwide continental glaciation. The student will participate in field studies of Pleistocene deposits and the weathering of these deposits.

MRSC 481 Special Topics var-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

MRSC 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

MRSC 500 Problems in Marine Science var-3sh
Graduate students or undergraduate students with advanced standing registering for this course may elect either of the following options.
Option A: Take a 200, 300, or 400 level MRSC course and complete, in addition to regular course requirements, a project in the area under direction of instructor.
Option B: Complete an independent research project. A research proposal must be approved by the Academic Committee of M.S.C. in advance of the time research is to be undertaken.

MUHI Music History

Department of Music
College of Fine Arts

MUHI 101 Introduction to Music 3c-0l-3sh
Presumes no technical background but does utilize the varied musical experiences of each individual to help extend interest as far as possible. Attendance at various concerts of university organizations, cultural life events, and visiting artist concerts is required to augment listening experiences of students.

MUHI 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergradoate students.

MUHI 301 Music History I 3c-0l-3sh
Prerequisites: ENGL 101, ENGL 202, HIST 195, HIST 305
An intensive study of the history and style of Medieval, Renaissance, and Baroque music. Considerable analytical listening required.

MUHI 302 Music History II 3c-0l-3sh
Prerequisite: MUHI 301 or permission
An intensive study of the history and styles of Classical, Romantic, and twentieth-century music to 1950. Considerable analytical listening required.

MUHI 322 Medieval and Renaissance Music 3c-0l-3sh
An intensive study of the plainchant foundations in the early Middle Ages; the origins of polyphony; sacred and secular music of the thirteenth to the sixteenth centuries; special emphasis on Dufay, Josquin, Palestrina, and their contemporaries.

MUHI 323 The Baroque Era 3c-0l-3sh
Prerequisites: MUHI 301, 302
Extends from Monteverdi through Bach and Handel and considers vocal and instrumental forms, styles, and practices of era.

MUHI 324 The Classical Era 3c-0l-3sh
Prerequisites: MUHI 301, 302
A survey of music from about 1725 to about 1827, with special attention to the music of Mozart and Haydn. Consideration is given also to the works of D. Scarlatti and C.P.E. Bach.

MUHI 325 The Romantic Era 3c-0l-3sh
A survey of music from about 1800 to 1910, with attention directed to the earlier romantic composers such as Beethoven, Schubert, Mendelssohn, and Berlioz through the later romantic composers such as Wagner, Tschaikowsky, Mahler, and Dvorak as well as others.

MUHI 420 The Twentieth Century 3c-0l-3sh
Prerequisites: MUHI 301, 302
A survey of the stylistic trends of music from 1900 to the present, beginning with Debussy, Ravel, and other impressionists through the music of Schonberg, Stravinsky, Webern, Honegger, and Milhaud. Offered infrequently.

MUHI 421 American Music 3c-0l-3sh
Prerequisites: MUHI 301, 302
A study of history and literature of music in America from 1600 to the present day.

MUHI 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

MUHI 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

MUSC Music

Department of Music
College of Fine Arts

MUSC 110 Fundamentals of Theory 3c-0l-3sh
Rudiments of musical materials; harmonic, melodic, rhythmic, and basic formal procedures of the common practice period including pitch reading, interval construction, scales, and modes.

MUSC 111 Theory Skills I 0c-3l-2sh
Develops aural skills through dictation and interpretation of written music by sight-singing. Taken in conjunction with Theory I.

MUSC 112 Theory Skills II 0c-3l-2sh
Prerequisite: MUSC 111
Continuing development of aural skills and introduction of keyboard skills. Taken in conjunction with Theory II.

MUSC 115 Theory I 3c-0l-3sh
The study of the harmonic, melodic, and formal devices of the common practice period, from simple diatonic chords through secondary dominants.

MUSC 116 Theory II 3c-0l-3sh
Prerequisite: MUSC 115
The study of the harmonic, melodic, and formal devices of the common practice period, from simple diatonic chords through secondary dominants. Theory II introduces basic music forms.

MUSC 120 Brass Ensemble 0c-2l-0/1sh

MUSC 121 Chamber Singers 0c-3l-0/1sh

MUSC 122 University Chorale 0c-3l-0/1sh

MUSC 123 Symphony Band 0c-3l-0/1sh

MUSC 125 Marching Band 0c-6l-0/1sh

MUSC 126 Music Theater 0c-6l-0/1sh

MUSC 127 Percussion Ensemble 0c-4l-0/1sh

MUSC 129 University Symphony Orchestra 0c-5l-0/1sh

MUSC 130 String Ensemble 0c-2l-0/1sh

MUSC 131 University Wind Ensemble 0c-3l-0/1sh

MUSC 133 Woodwind Ensemble 0c-2l-0/1sh

MUSC 134 University Chorus 0c-3l-0/1sh

MUSC 135 Jazz Ensemble 0c-3l-0/1sh

MUSC 136 Advanced Jazz Ensemble 0c-3l-0/1sh

MUSC 137 Piano Accompanying var-1-1 or 0sh
Piano accompanying may be scheduled by qualified pianists from the Department of Music in partial fulfillment of ensemble requirements. May be repeated for credit. Pianists registered for this course will provide accompaniments for Department of Mosic students in solo vocal or instrumental performances in area and departmental recitals and/or in voice and instrumental lessons. Registration must be approved by a designated Department of Music faculty member from the piano area.

MUSC 151 Class Voice I 1c-1l-1sh
Conceived for non-Voice majors. Development of correct vocal production techniqoes through individual and group performance in class. Use of the voice as a tool for theory skills and for eventual use in the music classroom.

MUSC 152 Class Voice II 1c-1l-1sh
A continuation of Class Voice I. Resumes development of correct vocal production techniques through performance.

MUSC 153 Class Piano I 1c-1l-1sh
Designed for students with no significant background in piano who need to develop functional keyboard skills. The emphasis is placed on harmonizing melodies and playing simple accompaniments.

MUSC 154 Class Piano II 1c-1l-1sh
A continuation of Class Piano I.

MUSC 155 Class Strings I 1c-1l-1sh
For Music Education majors who will develop rudimentary playing techniques sufficient to initiate instruction for beginning students. The emphasis is placed on correct playing positions and tone production for violin, viola, cello, and double bass.

MUSC 157 Class Percussion I 1c-1l-1sh
A practical introduction to the various instruments of the percussion family. Students will demonstrate correct playing techniques and develop a resource file containing information on percussion instruments and instructional materials as needed by the school music teacher.

MUSC 159 Class Brass I 1c-1l-1sh
For Music Education majors who will demonstrate rudimentary playing techniques and tone production skills to initiate beginning instruction. Students will develop playing on trumpet or French horn and trombone, euphonium, or tuba.

MUSC 161 Class Woodwinds I 1c-1l-1sh
For Music Education majors who will acquire correct tone production and playing techniques sufficient to initiate beginning instruction. Students will demonstrate skills with flute, clarinet, saxophone, and oboe or bassoon.

MUSC 163 Class Guitar I 1c-1l-1sh
Designed for students with no significant background in guitar who wish to develop functional playing skills. The emphasis is placed on using the guitar as an accompanying instrument.

MUSC 211 Theory Skills III 0c-3l-2sh
Prerequisites: MUSC 111, 112
Further development of aural and keyboard skills. Taken in conjunction with Theory III.

MUSC 212 Theory Skills IV 0c-3l-2sh
Prerequisites: MUSC 111, 112, 211
Culmination of development in aural and keyboard skills. Taken in conjunction with Theory IV.

MUSC 215 Theory III 3c-0l-3sh
Prerequisites: MUSC 115, 116
An extension of the techniques of the eighteenth and nineteenth centuries to include modulation, altered chords, more advanced musical forms, and contrapuntal procedures.

MUSC 216 Theory IV 3c-0l-3sh
Prerequisites: MUSC 115, 116, 215
An extension of the techniques of the eighteenth and nineteenth centuries to include modulation, altered chords, more advanced musical forms, and contrapuntal procedures. Theory IV concentrates largely on music and materials of the present century.

MUSC 217 Keyboard Harmony I 1c-1l-1sh
Prerequisite: Nominal facility at keyboard
Designed to develop keyboard skills so the student may realize and produce in sound basic harmonic progressions.

MUSC 218 Keyboard Harmony II 1c-1l-1sh
Prerequisite: MUSC 217
A continuation of Keyboard Harmony I, involving chromatic harmony and more complex progressions.

MUSC 224 Jazz Improvisation Techniques I 3c-0l-3sh
A study of the basic materials and practices for improvising or extemporaneous playing.

MUSC 225 Jazz Improvisation Techniques II 3c-0l-3sh
A continuation of the basic materials and practices for improvising or extemporaneous playing. Makes use of more complicated and involved harmonic progressions utilizing extended choral harmonies.

MUSC 240 Technology in the Music Classroom 2c-1l-2sh
Prerequisite: Sophomore standing. BTED/COSC 101
Introduces the student to the technology resources available for use in the music classroom and with instructional technologies appropriate to their application in K-12 settings. Students will be exposed to a variety of media and will have the opportunity to gain familiarity in their use. The emphasis will be placed on the use of the computer in the classroom, computer-based instruction, and Musical Instrument Digital Interface (MIDI).

MUSC 281 Special Topics var 1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergradoate students.

MUSC 304 Form and Analysis I 2c-0l-2sh
Prerequisite: MUSC 216
A thorough study of smaller forms of music.

MUSC 306 Counterpoint I 2c-0l-2sh
Prerequisite: MUSC 216
After study and analysis of the style of sixteenth-century contrapuntal writing, student will do original writing using techniques and devices of period. As time permits, same approach will be made to explore style of seventeenth- and eighteenth-century composers.

MUSC 309 Orchestration I 2c-0l-2sh
Prerequisite: MUSC 216
All instruments of orchestra are studied from the viewpoint of their contribution to the total sound of ensemble. Ranges and timbres are considered, as well as actual arranging of selected music.

MUSC 311 Fundamentals of Conducting 3c-0l-2sh
The emphasis will be placed on fundamental physical skills of conducting process; various beat patterns are mastered and elementary score reading and interpretation are considered.

MUSC 312 Choral Conducting 3c-0l-2sh
Prerequisite: MUSC 311
Provides an opportunity for the student to apply basic conducting techniques to choral music. Each student conducts the class in standard choral works. Includes survey of suitable literature, organizational problems, voice testing, rehearsal techniques, program building, interpretation, and diction.

MUSC 313 Instrumental Conducting 3c-0l-2sh
Prerequisite: MUSC 311
Provides the student with an opportunity to apply basic conducting skills to various instrumental ensembles. Includes survey of suitable literature, organizational problems, audition procedores, rehearsal techniques, program building, and interpretation.

MUSC 331 Elementary Methods 3c-0l-3sh
Includes analytical study of texts, recordings, equipment, instruments, and other materials suitable to musical development of elementary pupils; proper treatment of child voice; selection, use, and teaching of rote songs; rhythmic activities and development; music reading; part singing; planning and organization; guided observations; and evaluation techniques.

MUSC 333 Secondary Methods 3c-0l-3sh
Includes General Music Class, choral organizations, changing voice, techniques of instruction, including team teaching and programmed learning, high school theory courses, high school music literature courses, scheduling, administrative problems, curriculum development, evaluation of materials and equipment, evaluative techniques, and guided observation. Extra laboratory sessions are required.

MUSC 335 Music for the Exceptional Student 2c-2l-2sh
Develops music education skills, techniques, and materials for the emotionally, mentally, physically, or neurologically handicapped student and the gifted. Designed for students in music education, special education, and elementary education.

MUSC 337 General Music in Middle Schools 3c-0l-3sh
Prerequisite: MUSC 331
Provides general practices and pedagogy related to recent standards for a comprehensive, sequential middle school general music curriculum. Specific focus on curriculum development, lesson planning, instructional strategies, adolescent behavioral characteristics, as well as diverse materials and resources.

MUSC 340 Woodwind Instrument Repair 0c-2l-2sh
Prerequisites: MUSC 133, Teacher Certification
Designed for students preparing for teaching careers in instrumental music. Instruction will be conducted in a laboratory setting and will include development of the diagnostic and repair skills necessary to deal with the problems most frequently encountered in a public school classroom on the clarinet, flute, and saxophone.

MUSC 351 Italian Diction and Literature 2c-0l-2sh
For first-semester voice majors. Meets for two hours per week. The emphasis is on pronunciation for the stage and readings of Italian song texts. Italian madrigals, solo song literature, and operatic repertoire are also studied.

MUSC 353 French Diction and Literature 2c-0l-2sh
For third- or fourth-semester voice majors. Meets for two hours per week. The emphasis is on pronunciation for the stage and the International Phonetic Alphabet. French solo song literature and operatic repertoire are also studied.

MUSC 354 German Diction and Literature 2c-0l-2sh
For second-semester voice majors. Meets for two hours per week. The emphasis is on pronunciation for the stage. German solo song literature as well as Bach chorales are studied.

MUSC 405 Piano Pedagogy 3c-0l-3sh
Prerequisites: Junior standing in Piano and a Piano major or minor
A survey of current and significant past developments in teaching of piano, both privately and in small and large classes. The various piano methods are analyzed, compared, criticized, and adapted to each individual's use.

MUSC 406 Voice Pedagogy 3c-0l-3sh
Prerequisites: A voice major or minor and permission of the instructor
A survey of current and past development in teaching of voice, both privately and in small and large classes. The various vocal methods are analyzed, compared, criticized, and adapted to each individual's use.

MUSC 408 Marching Band Techniques 2c-0l-2sh
Considers building a band show; alignment of ranks and files; development of a standard pace of 5 to 5 and 8 to 5; selection of music; instrumentation; techniques of developing morale; and fundamentals of uniform design.

MUSC 411 Composition I 2c-0l-2sh
Prerequisite: MUSC 216
Instruction is individualized. Compositional devices studied through analysis of works by major composers. Students will write several original compositions utilizing smaller forms.

MUSC 412 Composition II 2c-0l-2sh
Prerequisite: MUSC 411
A continuation of Composition I.

MUSC 413 Composition III 2c-0l-2sh
Prerequisite: MUSC 412
Students will write several original compositions utilizing larger forms.

MUSC 414 Composition IV 2c-0l-2sh
Prerequisite: MUSC 413
A continuation of Composition III. Outstanding works will be programmed by university performing ensembles.

MUSC 475 Music Lab var-0sh
All music majors must attend eight recitals per semester and all departmental recitals, as well as all recitals for their respective performance areas.

MUSC 481 Special Topics 3c-0l-3sh
Prerequisite: As appropriate to course content
May provide an in-depth study of a narrowly defined area of the discipline. Subject matter will change with repeated offering of the course. May be repeated for credit.

MUSC 482 Independent Study var-1-6sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

MUSC 493 Internship in Music var-1-6sh
Designed for music majors who wish to receive practical experience working with people in music or in areas related to music.

NMDT Nuclear Medicine Technology

Department of Nursing and Allied Health Professions
College of Health and Human Services

NMDT 427 Nuclear Scintigraphy 3c-0l-3sh
Theoretical aspects of nuclear medicine imaging procedures, including applicable pathophysiology, technical aspects for data acquisition, and computer analysis of data. Systemic radionuclide therapy procedures are also discussed.

NMDT 428 Radiation Physics 3c-0l-3sh
Applicable aspects of nuclear and atomic physics are covered both in theory and mathematical formulae. Theoretical topics include atomic and nuclear structure, radioactive decay, interactions with matter, and radionuclide production methods. Mathematical concepts discussed are the decay equation, equilibrium, and radiation dosimetry.

NMDT 429 Nuclear Medicine Instrumentation 2c-1l-3sh
Covers the basic principles of both in vitro and in vivo instrumentation. The design, operation, and quality control of gas detectors and scintillation detectors are covered. Survey equipment, spectrometers, and stationary imaging devices are presented with their application to nuclear medicine. Hands-on laboratory experience with single channel analyzers and Anger cameras is included.

NMDT 430 Radiation Biology and Radiation Protection 2c-0l-2sh
Topics include ionization and energy transfer; molecules, cellular, tissue, and organ response to radiation; acute and chronic effects of radiation; radiation protection; licensing requirements; recordkeeping; and management of clinical radiation spills.

NMDT 431 In Vivo/In Vitro NonImaging 1c-0l-1sh
In vivo clinical nuclear medicine procedures not resulting in images as well as principles of in vitro radioassay are presented. Included are venipuncture, blood volumes, red cell studies, Schillings test, principles of immunology, various types of radioassay, and sensitivity and specificity of procedure.

NMDT 432 Radiopharmaceuticals 3c-0l-3sh
Topics include tracer theory, pharmacological actions, localization methods, radiopharmaceutical properties, radionuclide generators, radiopharmaceutical preparations and quality control, and transient vs. secular equilibrium. Routinely used radiopharmaceuticals are discussed.

NMDT 433 Introduction to Tomographic Imaging 1c-0l-1sh
An introduction to the basic principles of cross-sectional anatomy and tomographic imaging is presented. Topics include body planes and cross-sectional anatomy of the heart, brain, liver, and lumbar spine, as applicable to nuclear medicine, and the theory and application of both SPECT and PET imaging systems.

NMDT 434 Clinical Nuclear Medicine 0c-40l-16sh
Prerequisites: Completion of 77sh at IUP and Phase I and NMI
Students complete 1,320 hours of supervised clinical training at an affiliate hospital. Students receive instruction and participate in the performance of various clinical nuclear medicine procedures, patient care, administrative duties, radiopharmaceutical preparation and quality control, equipment quality control, quality assurance, and radiation safety. Students develop both their technical skills and interpersonal communication skills for incorporation into the medical community and to provide high-quality patient care. Only offered on a pass/fail basis.

NURS Nursing

Department of Nursing and Allied Health Professions
College of Health and Human Services

NURS 211 Nursing Practice I 0c-3l-1sh
Prerequisite: Sophomore standing
Prerequisites or Corequisites: BIOL 105, 150 or 151
The first of two clinical courses that presents the concepts and abilities fundamental to the practice of professional nursing and provides a foundation on which students can build their professional knowledge base as well as their interpersonal and psychomotor skills. Clinical assignments in a variety of settings provide opportunities for students to develop basic clinical practice skills.

NURS 212 Professional Nursing I 2c-0l-2sh
Prerequisite: Sophomore standing
Introduces students to the discipline of nursing and values that are fundamental to practice. Caring as a concept central to the practice of professional nursing will provide the framework for examining the values of the profession. Human diversity and the effects that culture, socioeconomics, ethnicity, and religion have on health status and response to health care will be studied. An overview of the healthcare system in the United States and access issues will be examined. As a foundation for client contact in subsequent courses, students will learn therapeutic communication skills and theory related to teaching and learning. Service/learning and team-building experiences will be an integral component of the course.

NURS 213 Nursing Practice II 0c-3l-1sh
Prerequisites: NURS 211, 212
Corequisites: NURS 214, 236
Builds on Nursing Practice I and provides opportunities for students to continue to build professional knowledge and skills with diverse individuals and families in a variety of settings. An emphasis is placed on developing ability to perform health assessments, using therapeutic communication, and executing basic nursing skills while promoting healthy behaviors.

NURS 214 Health Assessment 2c-0l-2sh
Prerequisites: BIOL 150 or 151, NURS 211, 212
Prerequisites or Corequisites: BIOL 150 or 151, FDNT 212
Corequisite: NURS 213
Introduces the student to basic health assessment. Health assessment is a systematic method of data collection, organization, and validation for the purpose of determining a client's health status. Will involve assessment of clients across the lifespan. Emphasizes assessment of client needs that affect the total person, which is consistent with nursing's holistic approach to client care. Methods of data collection used for health assessments include observing, interviewing, and examination. The student will learn to apply these methods effectively in order to gather accurate and complete assessments.

NURS 236 Foundations of Nursing 3c-0l-3sh
Prerequisites: Sophomore standing, CHEM 102
Introduces students to fundamental nursing concepts that apply to the practice of professional nursing with individuals. Topics include nursing theories related to professional practice, elements of holistic care, promotion of psychosocial and physiologic health, and application of pharmacology in nursing practice.

NURS 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

NURS 302 Core I 2c-0l-2sh
Prerequisite: NURS 280
Emphasizes the involvement of nurses and nursing in selected aspects of wellness promotion and maintenance. The theory base for the use of the nursing process to support individuals and families through maturational change and the childbearing cycle is presented.

NURS 303 Clinical Laboratory I 0c-14l-5sh
Prerequisites: NURS 280, 285
A clinical laboratory course which enables the student to care for individuals and families across the life span. Guided experiences are provided in hospital and community-based facilities. The nursing process is utilized to promote and maintain wellness in individuals within families.

NURS 304 Core II 2c-0l-2sh
Prerequisite: NURS 302
Emphasizes the involvement of nurses and nursing in selected aspects of wellness, promotion, maintenance, and restoration. The theory base for the use of the nursing process is expanded to include family, community health, and transcultural nursing concepts.

NURS 305 Clinical Laboratory II 0c-14l-5sh
Prerequisite: NURS 303
A clinical laboratory course which enables the student to provide care to individuals and families with acute and chronic health problems across the life span. Guided experiences are provided in hospital and community-based facilities and individuals' homes. The nursing process is utilized to promote, maintain, and restore optimal wellness in individuals within families.

NURS 312 Professional Nursing II 2c-0l-2sh
Prerequisite: NURS 212
Corequisite: NURS 337 or 339 or permission of instructor
Provides the nursing major with a working knowledge of the values, code of ethics, ethical principles, professional standards, and legal framework that govern clinical decisions, determine professional conduct, and guide interactions with clients, families, colleagues, and other health care providers. Students will formulate an ethical decision making framework that, by incorporating personal values, professional values, moral concepts, and legal mandates serves as a guide to professional practice. Using a problem-based approach, students will study legal and ethical frameworks that guide professional practice and relate/apply these to actual clinical situations.

NURS 316 Research Utilization in Nursing 3c-0l-3sh
Prerequisites: NURS 212 and 236 or permission of instructor
Prerequisites or Corequisites: ENGL 202, MATH 217
Focuses on understanding and critiquing nursing research. The emphasis will be to understand the research process and to apply research findings to practice. Students will describe the various stages of the research process and apply these steps to evaluate clinical nursing research problems. The focus will be on developing the necessary skills to engage in scholarly research writing.

NURS 322 Maintenance and Restoration of Wellness I 3c-0l-3sh
Prerequisites: NURS 280, 285
Introduces pathophysiologic change in individuals across the life span and associated nursing management. Topics include caring for the individual who requires surgery or whose alteration in health is related to problems in oxygenation, nutrition, and fluid and electrolyte balance.

NURS 323 Maintenance and Restoration of Wellness II 3c-0l-3sh
Prerequisite: NURS 322
Physiologic and psychologic pathology in individuals across the life span and associated nursing management. Topics include caring for the individual whose alteration in health is related to problems with reproductive, cognitive-perceptual, motor, metabolic, and elimination function.

NURS 334 Transitions in Professional Nursing 3c-0l-3sh
Prerequisite or Corequisite: ENGL 202
Corequisite: Registered nurse
Explores the dynamic nature of health and its impact on the practice of nursing. Nursing theories, concepts, and issues related to nursing practice will be analyzed. Linkages among theory, research, and practice will be explored for relevance and utility. Writing-intensive course.

NURS 336 Adult Health I 4c-0l-4sh
Prerequisites: BIOL 241; NURS 212, 213, 214, 236; PHYS 151-161
Prerequisite or Corequisite: NURS 316
Corequisite: NURS 337
Introduces the student to disease processes and treatment regimens and examines their impact on adults throughout their life span. An emphasis is placed on increasing student knowledge about assessing human responses to changes in health, determining appropriate nursing interventions, and identifying the physiological and psychosocial basis for nursing actions.

NURS 337 Adult Health Clinical I 0c-15l-5sh
Prerequisites: BIOL 241; NURS 212, 213, 214, 236; PHYS 151-161
Prerequisite or Corequisite: NURS 316
Corequisite: NURS 336
Students are provided with opportunities to apply the nursing process with adults and aging families in a variety of settings. An emphasis is placed on increasing the student's ability to perform comprehensive health assessments and to use assessment data to identify problems, intervene, and evaluate care. Students will function as a member of the health care team, identify discharge-planning needs, and differentiate between collaborative and independent nursing activities. Service learning is a component of the course.

NURS 338 Maternal-Child Health 4c-0l-4sh
Prerequisites: BIOL 241; NURS 213, 214, 236; PHYS 151-161; PSYC 310
Corequisite: NURS 339
Focuses on knowledge essential to provide nursing care for pregnant women and their children within a family context. The first half of the course emphasizes the changes experienced by the woman and family during normal and complicated pregnancy as well as those of the developing fetus and neonate. The second half focuses on acute and chronic health problems of infants, children, and adolescents.

NURS 339 Maternal-Child Health Clinical 0c-15l-5sh
Prerequisites: BIOL 241; NURS 213, 214, 236; PHYS 151-161; PSYC 310
Corequisite: NURS 338
Provides clinical learning experiences designed to enable students to provide nursing care for primary prevention/intervention with child-bearing families and with children and secondary prevention with women, children, and their families. These experiences are planned in a variety of ambulatory, community, and acute-care settings to enable the student to develop core values, knowledge, competencies, and skills associated with nursing care of mothers, children, and their families.

NURS 402 Core III 2c-0l-2sh
Prerequisite: NURS 304
Emphasizes the nurse's roles as accountable provider and coordinator of care and member of a profession. The specific issues that are addressed are quality assurance in provision of patient care; rights and responsibilities of the individual, the nurse as an employee, and the employer; current environmental health concepts.

NURS 403 Clinical Laboratory III 0c-14l-5sh
Prerequisite: NURS 305
A clinical laboratory course which affords the opportunity to apply the nursing process as provider and coordinator of care with individuals and families experiencing complex health care needs in a variety of health care facilities.

NURS 404 Core IV 2c-0l-2sh
Prerequisite: NURS 402
Emphasizes the nurse's roles as provider and coordinator of care in health care facilities and in emergency and disaster situations. Concepts and principles related to the management of the health care team, community health, and rehabilitation are addressed.

NURS 405 Clinical Laboratory IV 0c-14l-5sh
Prerequisite: NURS 403
A clinical laboratory course which affords the opportunity for the application of critical thinking, health teaching, and management skills. Emphasizes development of the caregiver role in selected areas of clinical practice; development of the care provider and coordinator roles in inpatient and community settings with individuals and families experiencing complex health care needs; integration of the roles of provider and coordinator of care and member of a profession.

NURS 407 Skills for Professional Success 1c-0l-1sh
Prerequisite: must be enrolled in senior-level nursing courses
A 1sh elective for senior nursing majors designed to help students foster clinical judgment skills by focusing on critical thinking and test-taking. An emphasis is placed on preparing students with the skills that are essential for success on the National Council Licensure Examination for Registered Nurses (NCLEX-RN).

NURS 411 Advanced Health Assessment 2c-3l-3sh
Prerequisites: Registered Nurse or permission of instructor
This clinical course will build upon the basic assessment techniques of the registered nurse. Designed to provide the student with the ability to assess the health status of adults. Will enable the student to collect a comprehensive health history and perform complete physical examination on adults from various backgrounds. Examination techniques and identification of deviations from normal will be the focus.

NURS 412 Professional Nursing III 2c-0l-2sh
Prerequisites: NURS 312 and 337 and 339 or permission of instructor
The professional nurse is expected to use clinical, managerial, and personal leadership skills to ensure the delivery of high-quality, cost-effective care in divergent health care delivery systems. The study of leadership and management skills and processes will be Approached as inherent elements for all levels of nursing practice. The role of designer/manager/coordinator of care in professional nursing will be examined in depth.

NURS 422 Maintenance and Restoration of Wellness III 3c-0l-3sh
Prerequisite: NURS 323
Emphasizes pathophysiology and psychopathology for understanding the complex process of the individual's adaptation to crisis. The theory base for the application of the nursing process in the care of individuals requiring hospitalization, life-sustaining treatment, intensive monitoring, and crisis intervention is discussed.

NURS 423 Maintenance and Restoration of Wellness IV 3c-0l-3sh
Prerequisite: NURS 422
Emphasizes strategies used in assisting individuals and their families in the promotion, maintenance, and restoration of optimal wellness. The theory base for the application of the nursing process when illness is being managed in acute, long-term care, and community settings is discussed.

NURS 430 Nursing Research 3c-0l-3sh
Prerequisite: MATH 217
The focus is on evaluating research through a study of research design, methodologies, sampling, data analysis, and significance of findings. Consideration is given to issues in conducting research and the impact on problems investigated, the nurse researcher, and the consumer of research.

NURS 432 Psychiatric/Mental Health 2c-0l-2sh
Prerequisites: NURS 336, 337, 338, 339
Corequisite: NURS 435
Prerequisite or Corequisite: NURS 412
Focuses on the principles and concepts that guide nursing practice in a variety of psychiatric/mental health settings. The role of the nurse in primary, secondary, and tertiary prevention/intervention is addressed as it relates to individuals, families, and aggregates.

NURS 434 Community Health 2c-0l-2sh
Prerequisites: NURS 336, 337, 338, 339, or permission of instructor
Corequisite: NURS 435 or permission of instructor
Prerequisite or Corequisite: NURS 412
Focuses on nursing care that is population and community oriented. An emphasis is placed on the community as a client, perspectives and influences of the health care delivery systems, theoretical frameworks applicable to community health, contemporary issues in community health nursing, and nursing roles as designers, managers, and coordinators of care in the community.

NURS 435 Community and Psychiatric/Mental Health Clinical 0c-15l-5sh
Prerequisites: NURS 336, 337, 338, 339
Corequisites: NURS 432, 434
Prerequisite or Corequisite: NURS 412
Focuses on community-based and community health nursing experiences to enable students to provide health promotion, risk reduction, and disease prevention in a wide variety of community settings and with diverse populations. Students also will have experiences within acute and community-based psychiatric care facilities, working as members of a multidisciplinary team to provide primary, secondary, and tertiary prevention/intervention. Emphases will also be placed on nursing management and development of nursing strategies to assist at-risk families, aggregates, and groups, while considering health care on a continuum throughout the life span. Opportunities for individual mentoring in a clinical area will be an integral part of the course.

NURS 436 Adult Health II 4c-0l-4sh
Prerequisites: NURS 336, 337
Prerequisite or Corequisite: NURS 412
Corequisite: NURS 437
Builds on Adult Health I, focusing on the adult/family coping with complex health problems. The relationships among disease states, treatment, and associated nursing responsibilities are emphasized as students build their knowledge base of pharmacology, therapeutic procedures, rehabilitation needs, and teaching-learning strategies. Principles underlying the use of technology in clinical practice provide a basis for the concurrent clinical course.

NURS 437 Adult Health Clinical II 0c-15l-5sh
Prerequisites: NURS 336, 337, 338, 339
Corequisite: NURS 436
Prerequisite or Corequisite: NURS 412
Designed to provide opportunities for clinical practice as a provider of care for complex, acutely ill clients in a variety of settings including intensive care unit, monitored units, medical-surgical units, and rehabilitation settings. Focus will be on secondary prevention/intervention for long-term critically ill patients. The role of designer/manager/coordinator of care will be emphasized with opportunities to apply management principles and practice leadership skills in the acute care and rehabilitation setting. Opportunities for students to receive preceptoring with a registered nurse will be an integral component of the course.

NURS 450 A Cognitive Approach to Clinical Problem Solving 3c-0l-3sh
Prerequisite: NURS 412
Focuses on advanced clinical problem-solving and decision-making skills needed by professional nurses. Factors that influence clinical problem solving will be examined to facilitate higher level thinking in simulated clinical situations.

NURS 454 Health Promotion of Families Across the Lifespan 3c-0l-3sh
Prerequisite: NURS 334
The first part focuses on the underlying theories and frameworks for family structure, function, and assessment. The second part focuses on application and evaluation of families in the context of health promotion. The family is studied across the life span. Emphasis is placed on family assessment and cultural diversity and on the stressors which impact families during the various stages of life. Students will be required to conduct a family assessment in the community.

NURS 455 Introduction to Nursing Informatics 3c-0l-3sh
Prerequisite: Registered Nurse or permission of instructor
An introductory and overview in the application of the disciplines of nursing science, computer science, and information science in collecting, processing, and managing information to promote decision making in nursing.

NURS 467 Leadership Practicum 0c-6l-2sh
Prerequisite: NURS 334
Prerequisite or Corequisite: NURS 412
Focuses on role development in management and leadership for the Registered Nurse. Planned individualized experiences will afford the Registered Nurse student opportunities to apply management and leadership theories in a workplace setting. The faculty members will guide the student in theory-based practice and synthesis of theory to practice experiences.

NURS 469 Community Health Practicum 0c-6l-2sh
Prerequisite: NURS 334
Prerequisite or Corequisite: NURS 434
Allows the Registered Nurse to apply knowledge to the practice of community-based and community health nursing. Emphasis is placed on health promotion, risk reduction, and disease prevention in a wide variety of community settings and with diverse populations.

NURS 480 Seminar in Nursing var-1-3sh
A seminar which provides a forum for the exploration and discussion of issues relevant to the professional nurse. Emphasis is placed on the development of professional values, critical thinking, decision-making, and communication skills. A selection of topics on current issues and trends will be offered; each will focus on a particular theme related to nursing practice.

NURS 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

NURS 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

NURS 493 Internship var-1-12sh
Prerequisites: NURS 236 or Registered Nurse; 57sh completed; minimum 2.0 GPA
Supervised experience in a practice setting which extends and complements coursework in nursing. The types of practice settings may include acute care hospitals, outpatient health centers, and community agencies.

PHIL Philosophy

Department of Philosophy and Religious Studies
College of Humanities and Social Sciences

PHIL 101 Informal Logic: Methods of Critical Thinking 3c-0l-3sh
Designed to develop students' ability to analyze critically deductive and inductive argumentation, rhetoric, and persuasion, by examples drawn from media, textbooks, advertising, scholarly works, personal contacts, etc.

PHIL 120 Introduction to Philosophy 3c-0l-3sh
Designed to acquaint the beginning student with philosophical problems and methods in such areas as metaphysics, epistemology, logic, and value theory.

PHIL 221 Symbolic Logic I 3c-0l-3sh
An introduction to fundamental concepts in deductive logic with an emphasis on teaching students the basis of clear logical thought. Some of the historical origins of logical theory are explored. Students learn to symbolize arguments in the truth-functional logic and the predicate logic. Ways of testing arguments for validity as well as proofs are covered, with a stressing of application to actual arguments drawn from numerous sources in the media, philosophical issues, and moral problems.

PHIL 222 Ethics 3c-0l-3sh
An investigation of efforts to rationally justify moral judgment. Deals with fundamental issues such as: What is morality? Are moral notions cultural, rational, divine, or innate in origin? Are they relative or absolute? Are they freely chosen or determined by genetics and/or environment? Covers a variety of ethical theories significant both historically and contemporarily and applies those theories to current issues which involve moral dilemmas.

PHIL 223 Philosophy of Art 3c-0l-3sh
Investigates some of the major problems in the philosophy of art, e.g., the nature of beauty and the aesthetic experience, the ethics and politics of art, creativity, the nature of the work of art and aesthetic objects, the concept of fine art, and the evaluation of works of art and aesthetic objects.

PHIL 232 Philosophical Perspectives on Love, Marriage, and Divorce 3c-0l-3sh
Examines the philosophical foundations of contemporary Western institutions and ideologies of romantic love. Considers major positions in both the history of philosophy and contemporary philosophy. Investigates the concepts, problems, and philosophical theories central to understanding romantic love, marriage, and divorce.

PHIL 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

PHIL 321 Symbolic Logic II 3c-0l-3sh
Prerequisite: PHIL 221 or permission of instructor
A continuation of Symbolic Logic I designed to enable students to evaluate consistency of statements, validity of arguments, soundness and completeness of formal systems. Focus on quantificational calculus and inductive logic.

PHIL 323 Political Philosophy 3c-0l-3sh
An inquiry into the philosophical concepts underlying the major political theories from ancient Greece to the modern era. An emphasis will be placed on major authors and texts to demonstrate a continuum of ideas and their modifications, replacement, and revival, as well as novel political ideas. Possible topics: commonality; peace; internationalism; sovereignty; nature of the state; law; the ruler; cosmopolitanism; nationalism; social contract; liberty; obligation; property; racism; sexism; slavery.

PHIL 324 History of Philosophy I: Ancient and Medieval 3c-0l-3sh
Western philosophy of pre-Socratic, classical Greek, Roman, and medieval periods. Special attention given to Plato, Aristotle, Augustine, and Aquinas, as well as the philosophic schools.

PHIL 325 History of Philosophy II: Renaissance and Modern 3c-0l-3sh
A continuation of PHIL 324, beginning with fifteenth-century Renaissance thought and ending with the nineteenth-century precursors of contemporary philosophies.

PHIL 326 Phenomenology and Existentialism 3c-0l-3sh
A study of the phenomenological method as developed by Edmund Husserl and of the subsequent phenomenological movement as exemplified in the works of such representative figures as Heidegger, Merleau-Ponty, and Paul Ricoeour and of existentialism both as an independent movement of thought and as influenced by phenomenology and exemplified in the works of such representative figures as Kierkegaard, Jaspers, Marcel, Buber, and Sartre.

PHIL 330 Philosophy of Science 3c-0l-3sh
An investigation into the nature of formal and empirical sciences: structure of scientific thought and its dependence upon or independence of theory; the logical and metaphysical status of scientific laws and theoretical concepts; reductionism in science; the concept of causality; the logic of explanation; problems in confirmation theory; science and value. No special background required. Recommended for math and science majors.

PHIL 400 Ethics and Public Policy 3c-0l-3sh
An analysis of the ethical dimension of public policies. Provides a general understanding of ethical theories, then focuses on their application to specific policy issues. Topics will vary from semester to semester. See current schedule of classes.

PHIL 405 Justice and Human Rights 3c-0l-3sh
An introduction to theories of justice and an analysis of the concept of human rights which is central to a just society and to much moral, political, and legal dispute. Explores relevant major positions in the history of philosophy, but its major focus is contemporary and raises issues such as women's rights, black rights, animal and environmental rights, welfare rights, and rights to life (or death).

PHIL 410 Contemporary Analytic Philosophy 3c-0l-3sh
An investigation of twentieth-century Western positions such as pragmatism, logical positivism, logical and linguistic analysis.

PHIL 420 Metaphysics 3c-0l-3sh
A study of the nature of reality in general and of the main categories through which it is understood. The main topic areas of metaphysics concern: the one and the many; the relation of thought and being; the problem of universals; nominalism; realism; idealism; the nature of being, substance, essence, space, time, eternity, matter, mind; determinism and indeterminism.

PHIL 421 Theory of Knowledge 3c-0l-3sh
An investigation into problems involved in knowledge and justification and a consideration of methods suggested for their resolution. Particular attention is paid to issues such as knowledge, justification, certainty, objectivity, perception, and truth.

PHIL 450 Philosophy of Law 3c-0l-3sh
An examination of the nature of law and its relationship to such questions as morality, obligation, judicial review, justice, rights, punishment, liberty. Combines philosophical theory with consideration of selected court cases to develop a philosophical and legal understanding of law and its place in society.

PHIL 460 Philosophy of Language 3c-0l-3sh
An investigation of issues in the philosophy of language and related issues in linguistics (including anthropological linguistics, sociolinguistics, and psycholinguistics). Topics include, for example, the influence of language on perception, rationalist/empiricist perspectives on language acquisition, language and political control, reference, meaning, and truth.

PHIL 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

PHIL 482 Independent Study var-1-6sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. May be taken more than once to a maximum of 6sh. (This option is available to both philosophy majors and nonmajors.)

PHIL 482 Independent Study: Honors Project 3c-0l-3sh
Prerequisites: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office. 3.00 cumulative GPA, 15sh in Philosophy, and 3.20 GPA in departmental courses
Majors in Philosophy are invited to take 3sh of independent study designated Honors Project. Upon satisfactory completion, graduation with departmental honors is possible.

PHIL 493 Internship in Philosophy var-3-6sh
Prerequisites: Permission of the department, junior or senior PHIL major or double major, 2.5 GPA
A supervised experience of no longer than one semester and no less than five weeks. This would take place in either a public or private organization in areas that either extend and develop or complement coursework in Philosophy. Log and/or major paper required. Internships are to be done with a clear analysis, argumentation, and examination of governing principles.

PHYS Physics

Department of Physics
College of Natural Sciences and Mathematics

PHYS 100 Prelude to Physics 3c-0l-3sh
Prerequisite: MATH 100 or equivalent high school preparation
Designed to prepare students for their first course in quantitative physics by reviewing fundamental concepts involving measurement and error, graphing, motion, and applications of Newton's Laws in developing problem solving skills. In addition, the course will present an historical perspective as well as introduce students to the many opportunities that exist for those with a background in Physics.

PHYS 101 Energy and Our Environment 3c-0l-3sh
An overview of the areas of energy, transportation, and pollution. These topics are approached via the relevant concepts of physical science and physics. A nonlaboratory course for Liberal Studies requirements.

PHYS 111 Physics I Lecture 3c-0l-3sh
Prerequisites: Elementary algebra and trigonometry
General college physics: mechanics, wave motion, and sound.

PHYS 112 Physics II Lecture 3c-0l-3sh
Prerequisite: PHYS 111
Electricity and magnetism, heat, light, atomic and nuclear physics, and an elementary introduction to relativity and quantum theory.

PHYS 115 Physics I for Electro-Optics 2c-3l-3sh
Prerequisite: PHYS 100
Corequisite or Prerequisite: MATH 110 or 121
Designed to introduce students to the mechanical universe through the study of the motion of matter and waves and the causes of waves. The learning of quantitative problem solving skills will be emphasized. Includes a lab component.

PHYS 116 Physics II for Electro-Optics 2c-3l-3sh
Prerequisite: PHYS 115
By applying Newton's Laws of Motion to atoms and molecules the student is introduced to the basic principles of and connections between temperature, heat, and molecular motion at a fundamental level. Concepts involved in fluid flow, electric charge, and the origin of magnetism will be covered. The fundamental basis for the existence of electric and magnetic fields and the generation of electromagnetic energy as waves will be explored. Includes a lab component.

PHYS 121 Physics I Lab 0c-3l-1sh
Corequisite: PHYS 111
Physics laboratory at level of Physics I; exercises in mechanics, wave motion, and sound.

PHYS 122 Physics II Lab 0c-3l-1sh
Corequisite: PHYS 112
Physics laboratory at level of Physics II; exercises in optics, electricity and magnetism, and radioactivity.

PHYS 131 Physics I-C Lecture 3c-0l-3sh
Prerequisite: MATH 121, 123, or 127, at least concurrently
A calculus-based course in general college physics; topics covered are similar to those covered in Physics 111 but are treated in more depth through the use of calculus.

PHYS 132 Physics II-C Lecture 3c-0l-3sh
Prerequisite: MATH 122, 124, or 128, at least concurrently
A continuation of Physics I-C; topics covered are similar to those covered in Physics II but are treated in more depth through the use of the calculus.

PHYS 141 Physics I-C Lab 0c-3l-1sh
Corequisite: PHYS 131
Physics laboratory at same level as Physics I-C; exercises in mechanics, wave motion, and sound.

PHYS 142 Physics II-C Lab 0c-3l-1sh
Corequisite: PHYS 132
Physics laboratory at same level as Physics II-C; exercises in optics, electricity and magnetism, and radioactivity.

PHYS 151 Medical Physics Lecture 3c-0l-3sh
Development of concepts and principles of physics with a strong emphasis as to their use and application in medical and other biophysical areas.

PHYS 161 Medical Physics Lab 0c-3l-1sh
Corequisite: PHYS 151
Experiments dealing with applications of physical principles to the field of medicine. Practical experience with use of electronic equipment, chart recorders, etc., of type found in modern-day medicine will be introduced.

PHYS 222 Mechanics I 2c-0l-2sh
Prerequisites: PHYS 112 or 116 or 132; MATH 122 or 124
Covers the basic laws and concepts of the mechanical universe. The dynamics of a particle in one, two, and three dimensions are covered. Central forces, including planetary and satellite motion, are discussed and analyzed in detail using Newton's gravitational law. Other topics covered are statics, multiple particle system dynamics, mechanical energy, and oscillations.

PHYS 223 Mechanics II 2c-0l-2sh
Prerequisites: MATH 241, PHYS 222
Mechanics of a rigid body, constraints, oscillations, wave motion, introduction to Lagrangian and Hamiltonian formulation and relativistic mechanics.

PHYS 231 Electronics 3c-3l-4sh
Prerequisites: MATH 122, 124, or 128; PHYS 112 or 132
Circuit theory, transients, transistor circuits, frequency response, input and output impedance, feedback and electronic noise. Operational amplifiers and digital electronics.

PHYS 242 Optics 3c-0l-3sh
Prerequisites: MATH 122, 124, or 128; PHYS 112 or 132
Geometrical optics and physical optics; including interference, diffraction, and polarization. Quantum optics is introduced.

PHYS 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

PHYS 299 Cooperative Education I var-1-3sh
Prerequisites: PHYS 132; completion of 30sh with a minimum 2.0 GPA and approval of the cooperative education coordinator
This program blends classroom theory with practical application through job-related experience. Students will work in positions offered by the participating industrial or federal/state work-study program employers under joint supervision of the Physics faculty and the on-site supervisor. A co-op student must be a full-time university student in good academic standing and be planning to return to campus for completion of his/her degree program. Evaluation requirements may include on-site visitations by the faculty/coordinator, consultation with the on-site supervisor, and a major progress report by the student or the presentation of a detailed oral report before the departmental cooperative education committee.

PHYS 322 Electricity and Magnetism I 2c-0l-2sh
Prerequisite: PHYS 222
Electrostatic potential theory, dielectrics, dipole theory, magnetostatics, Maxwell equations for static fields, and Legendre's polynomials and other approximation methods.

PHYS 323 Electricity and Magnetism II 2c-0l-2sh
Prerequisite: PHYS 322
Time-dependent form of Maxwell equations, electromagnetic induction, vector potential, magnetism, radiation fields, and Poynting vector.

PHYS 331 Modern Physics 3c-0l-3sh
Prerequisites: PHYS 112 or 116 or 132; MATH 122 or 124
The history of modern physics will be covered. Particle and wave properties of matter will be explored using the ideas of quantum mechanics. Systems examined using the ideas of quantum and classical mechanics are atomic structure, solid state, and nuclear physics. The special theory of relativity will also be covered. Some of the problems will be solved using computers.

PHYS 342 Thermal and Statistical Physics 3c-0l-3sh
Prerequisites: MATH 122, 124, or 128; PHYS 112 or 132
Thermometry, laws of thermodynamics, low-temperature physics, entropy, properties of ideal gas, and an introduction to statistical mechanics.

PHYS 350 Intermediate Experimental Physics I 0c-6l-3sh
Prerequisites: PHYS 331; PHYS 242 or EOPT 120
The student will perform required fundamental experiments in areas of mechanics, optics, modern physics, and heat. Speaking before other classmates and faculty and competence in writing scientific papers and reports will be emphasized. Effectiveness in the collection of data is important. Computers will often be utilized to perform data taking and analysis.

PHYS 351 Intermediate Experimental Physics II 0c-6l-3sh
Prerequisites: PHYS 350
Increasingly sophisticated experiments in essential areas of physics. Digital computers and the Van de Graaff are available

PHYS 352 Applied Physics Laboratory 0c-4l-1sh
Prerequisites: PHYS 231, 355, or permission of instructor
The student is introduced to much of the fundamental equipment used in industry. The student is trained in the operation and proper use of this equipment through a series of experiments that teach him/her signal detection and analysis including data acquisition by computer. The student will receive instruction on the proper methods to be used for various oral and written presentations.

PHYS 353 Solid State Electronics Laboratory 0c-6l-3sh
Prerequisite: PHYS 352 or permission of instructor
The student will encounter a number of areas of current interest in semiconductor technology. The student will perform experiments and learn skills in such areas as device process simulation, device simulation, measurements of semiconductor materials, and measurement of device parameters. The student will also be instructed in the proper presentation of written and oral reports.

PHYS 355 Computer Interfacing 2c-2l-3sh
Prerequisite: COSC 110
Designed to teach the fundamentals of interfacing the personal computer to its physical surroundings. The students will learn how to collect data and to control experiments in real time. They will learn how to use digital to analog conversion (DAC) techniques and analog to digital conversion (ADC) techniques. They will also use a graphical software package (such as LabVIEW) to design icon-based interfacing tools, to learn how to use virtual instruments, and to analyze data (Offered as PY150: Computer Applications to Physics Laboratories prior to 1997-98)

PHYS 399 Cooperative Education II var-1-3sh
Prerequisites: PHYS 299; PHYS 350; completion of 80sh with a minimum 2.5 GPA and approval of the cooperative education coordinator
A second course in cooperative education. Includes instruction that builds upon learning experiences in college by combining and correlating them with learning experiences at the training station to meet the student's career goals. Evaluation requirements may include on-site visitations by the faculty/coordinator, consultation with the on-site supervisor, and a major progress report by the student or the presentation of a detailed oral report before the departmental cooperative education committee. No more than 3sh of PHYS 299, PHYS 399, and/or PHYS 493 may be used in fulfilling Physics major course requirements.

PHYS 432 Advanced Electronics 2c-3l-3sh
Prerequisite: PHYS 231
Digital measurement, switching circuits, logic circuits, counting, coding, input and output, AD and DA converters, computer organization.

PHYS 472 Nuclear Physics 3c-0l-3sh
Prerequisite: PHYS 331
A survey of nuclear physics, nuclear size, nuclear mass, reaction theory, types of radioactive decay, nuclear models, nuclear forces, and elementary particles.

PHYS 473 Quantum Mechanics I 4c-0l-4sh
Prerequisites: PHYS 222 and 331
Quantum mechanics following methods of Schrodinger and Heisenberg; the theory is applied to properties of harmonic oscillator, hydrogen atom, electron in a magnetic field, and radioactive decay of alpha particles.

PHYS 475 Physics of Semiconductor Devices I 3c-0l-3sh
Prerequisites: PHYS 231, 242, 342, or permission of instructor
Develops the basic foundation for a study of the theory of semiconductors. Elementary quantum concepts, the band theory of solids, electrical properties of solids, effective mass theory, and principles of semiconductor devices are discussed.

PHYS 476 Physics of Semiconductor Devices II 3c-0l-3sh
Prerequisite: PHYS 475 or permission of instructor
Discusses the physics and operation of a number of discrete devices including: bipolar transistors, MOSFETS, JFETS, CCDs, various diode technologies, photovoltaic and photoconductive devices, solid-state lasers, and light-emitting diodes.

PHYS 480 Seminar var-1sh
Speakers from within and outside the university conduct a seminar on a weekly or biweekly basis on different topics of interest in the physics community.

PHYS 481 Special Topics in Physics var-1-3sh
Prerequisite: As appropriate to course content
Varies from semester to semester and covers diverse topics in specific areas of physics. This course number is also used to offer courses under development.

PHYS 482 Independent Study in Physics var-1-6sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. Work is supervised by a Physics faculty member but does not necessarily involve regular lecture or laboratory hours.

PHYS 490 Solid State Physics 3c-0l-3sh
Prerequisites: PHYS 223 and 331
Reciprocal lattice, crystal structure, the quantization of fields to produce quasi-particles such as phonons, magnons, excitons. Fermi gas of electrons, energy bands, semiconductor crystals, and photoconductivity.

PHYS 493 Internship in Physics var-1-3sh
Prerequisites: PHYS 350, completion of 90sh with a minimum 2.5 GPA, and approval of the internship education coordinator
A supervised professional work-experience in physics and applied physics. Location, duties, internship, and hours are individually tailored to the student's career goals. A maximum of 3sh of internship in the studeot's major may be applied toward the physics major area elective requirements. Additional internship credit must he used as free electives. Evaluation requirements include on-site visitations by the faculty/coordinator, consultation with the on-site supervisor, and a major progress report by the student or the presentation of a detailed oral report before the departmental internship education committee.

PLSC Political Science

Department of Political Science
College of Humanities and Social Sciences

PLSC 101 World Politics 3c-0l-3sh
An analysis of contemporary (post-1945) state system and forces shaping the world in which we live. Student is given a framework within which to analyze contemporary internatiooal politics.

PLSC 111 American Politics 3c-0l-3sh
An introduction to American national government and politics, emphasizing Constitution, party system, Congress, Presidency, courts, and problems in national-state relations, civil rights, foreign policy, and social and economic policies.

PLSC 250 Public Policy 3c-0l-3sh
Emphasizes dynamics of government as they are evidenced in public opinion, pressure groups, political parties, and our governmental institutions; attention also directed toward the political-economical nexus within American society.

PLSC 251 State and Local Political Systems 3c-0l-3sh
Institutions and processes of state and local governments, with special attention to Pennsylvania; emphasis on the nature of federalism, state constitutions, and role of state and local government in an urban society.

PLSC 280 Comparative Government I: Western Political Systems 3c-0l-3sh
Analyzes Western political systems with emphasis upon major contemporary democratic governments of Europe. Analyzes and compares their political cultures, political institutions, and political processes.

PLSC 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

PLSC 282 International Relations 3c-0l-3sh
Provides a conceptual framework for understanding sovereignty, nationalism, power, security, dispute settlement, and diplomatic, legal, economic, and military relations of nation-states.

PLSC 283 American Foreign Policy 3c-0l-3sh
Examines formulation and execution of American foreign policy, with attention to governmental institutions, mass media, interest groups, and public opinion; emphasizes contemporary problems.

PLSC 285 Comparative Government II: Non-Western Political Systems 3c-0l-3sh
Analyzes major non-Western political systems with emphasis upon authoritarian and totalitarian systems. Analyzes and compares in a systematic manner their political cultures, political institutions, and political processes.

PLSC 300 Research Methods in Political Science 3c-0l-3sh
Prerequisite: PLSC 101 or 111
An examination of the application of the scientific approach to the investigation of social and political phenomena. Concentrates on approaches, methods, and computer tools. All political science majors and minors are strongly urged to enroll.

PLSC 320 International Law 3c-0l-3sh
Prerequisites: PLSC 101, 281, or permission of instructor
The study of the development, nature, and function of international law, including recent trends.

PLSC 321 International Organizations 3c-0l-3sh
Prerequisites: PLSC 101, 281, or permission of instructor
An inquiry into purposes, structures, and actions of contemporary international political organizations, such as United Nations, regional, and functional organizations.

PLSC 346 Political Sociology 3c-0l-3sh
Prerequisites: PLSC 111, SOC 151
Examines (a) who controls the state and state policy, (b) the role the state plays in stabilizing capitalism and protecting the power of the upper class, (c) the political activities of the middle and upper class, (d) labor, civil rights, welfare rights, and social movements in America. Cross-listed as SOC 458.

PLSC 350 The Presidency 3c-0l-3sh
An examination of the Office of President, with attentioo to constitutional foundations, evolution, structure, powers, and functions; some comparisons between presidential and parliamentary systems and between offices of President and governor.

PLSC 351 Legislative Process 3c-0l-3sh
A functional study of legislative bodies and process of legislation, covering organization of legislative assemblies, operation of committee system, procedures, bill drafting, aides, and controls over legislation.

PLSC 353 American Political Parties 3c-0l-3sh
The role of people, parties, and pressure groups in politics of American democracy; attention to sectional and historical roots of national politics, voting behavior, pressure group analysis, and campaign activities.

PLSC 354 Metropolitan Problems 3c-0l-3sh
Analyzes multiplicity of problems facing our metropolitan areas. Contemporary developments such as urban renewal, shrinking tax base, federal aid to cities, subsidized mass transit, municipal authorities, and political consolidation are examined.

PLSC 355 Intergovernmental Relations 3c-0l-3sh
Explores characteristics of federal systems of government, with emphasis on theories, origins, institutions, problems in intergovernmental relations in the United States, federal systems in other nations, and trends.

PLSC 356 Mass Media in American Politics 3c-0l-3sh
Variant theories of the symbolic relationship between American politics and the press are examined in the light of the American colonial-national experience. The special Constitutional rights given to the media are explored, with particular attention to radio-TV.

PLSC 358 Judicial Process 3c-0l-3sh
Prerequisite: PLSC 111
Explores nature and limits of judicial power, courts as policymaking bodies, selection of judges, decision process, external forces impinging on the courts, and role of Supreme Court in its relationship with Congress, the Presidency, and federalism.

PLSC 359 Constitutional Law and Civil Liberties 3c-0l-3sh
Prerequisite: PLSC 111
A study of civil liberties and civil rights issues through leading Supreme Court decisions; topics treated include First Amendment rights, procedural due process and the Bill of Rights, and Equal Protection problems in civil rights.

PLSC 360 Classical Political Thought 3c-0l-3sh
Restriction: Not for credit after PHIL 323
The origins and development of Western thought from Plato and Aristotle through Cicero and Saint Aquinas. The focus is especially on political participation as a way of life, the unity of political and moral conceptions in premodern political thought, and the relationship between order and justice.

PLSC 361 Modern Political Thought 3c-0l-3sh
Covers the major representatives of modern political thought since the Renaissance. Follows the development of the specifically modern notion of the state and political action through the works of Machiavelli, Hobbes, Locke, Rousseau, Marx, and Lenin. The emphasis will be on the "instrumentalist" state and the idea of a political science.

PLSC 362 American Political Thought 3c-0l-3sh
Covers a variety of American political ideas from the Puritans through recent radical and conservative critiques of American liberal democracy. Focus on the continuing development of the idea of individual rights, the political theory of the Constitution, and the tension between classical liberalism and popular rule.

PLSC 370 Introduction to Public Administration 3c-0l-3sh
Theories of organization and structural organization, personnel processes, executive functions, financial administration, the politics of administration, public relations, and problems of democratic control of bureaucracy.

PLSC 371 Issues in Public Administration 3c-0l-3sh
An intensive study of the role of federal agencies and their administrators in determining and developing public policy. Public administration in practice is emphasized by utilizing case studies.

PLSC 377 Political Behavior 3c-0l-3sh
Prerequisites: PLSC 111, PSYC 101
An interdisciplinary course which investigates the psychological bases of political behavior. Cross-listed as PSYC 377.

PLSC 380 Soviet Politics 3c-0l-3sh
Essential features of Communist party and government of the former U.S.S.R., including geographical and historical background and ideological and theoretical foundations. PLSC 280 should be taken prior to this course. (Course content is in revision to reflect changing structure.)

PLSC 382-387 Political Systems 3c-0l-3sh
An intensive, comparative study of the government and politics of a selected region. Suggested **Prerequisites:** PLSC 280 and/or 285; PLSC 382 Africa; PLSC 383 Asia; PLSC 384 Middle East; PLSC 385 Central and Eastern Europe; PLSC 387 Latin America

PLSC 388 Political-Military Strategy 3c-0l-3sh
Prerequisites: PLSC 281 or 283 or MS101-102
Deals with national security problems including decision making and budgeting, levels of strategy, the utility of force, and the impact of the military on American society.

PLSC 389 Developing Nations 3c-0l-3sh
Suggested **Prerequisites:** PLSC 280 and/or 285
Political characteristics of emerging nations; impact of economic and social change upon political structure; evolving patterns of political development; and techniques of nation-building.

PLSC 480 Political Science Seminar 3c-0l-3sh
Readings and written assignments on a specific topic determined by the instructor in charge.

PLSC 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

PLSC 482 Independent Study var-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

PLSC 493 Political Science Internship var 2-12sh
Prerequisites: 9sh in Political Science with 2.0 GPA; PLSC 111; approval of internship director and chairperson
Practical experience in government and politics. "Log" and research project required. Course grade determined by the instructor. Maximum of 6sh applied to minimum in major; maximum of 3sh applied to minimum in minor.

PNAF Pan-African Studies

College of Humanities and Social Sciences

PNAF 131 Introduction to Pan-African Studies 3c-0l-3sh
A multidisciplinary introduction to Africa and the African diaspora. Explores the effects of Africa's history, in particular colonialism and independence, on present day Africa; examines the relationship between Africa and the African diaspora with special attention to African arts, social systems, and political and economic development; looks at Africa's contribution to contemporary culture in the Americas.

PNAF 281 Special Topics 3c-0l-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are primarily for lower-level undergraduate students.

PNAF 481 Special Topics 3c-0l-3sh
Prerequisite: Permission of the instructor and program coordinator
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

PNAF 482 Independent Study var 1-to-3sh
Prerequisite: Prior approval through advisor, faculty member, program coordinator, dean, and Provost's Office
Students with interest in independent study of a Pan-African Studies-related topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

PSYC Psychology

Department of Psychology
College of Natural Sciences and Mathematics

PSYC 101 General Psychology 3c-0l-3sh
An introduction to the scientific study of behavior and mental processes.

PSYC 280 Psychological Inquiry 3c-0l-3sh
Prerequisites: PSYC 101, Psychology minors
Introduces students minoring in Psychology to issues central to carrying out and interpreting empirical research in the field. Students will become more sophisticated consumers of empirical research findings. Students who have successfully completed PSYC 290 are not permitted to take this course for credit.

PSYC 290 Research Design and Analysis I 3c-2l-4sh
Prerequisites: MATH 217, PSYC 101
A laboratory course devoted to designing, conducting, and evaluating results of psychological experiments.

PSYC 291 Research Design and Analysis II 3c-2l-4sh
Prerequisites: PSYC 101, grade of C or better in PSYC 290
A continuation of Research Design and Analysis I.

PSYC 310 Developmental Psychology 3c-0l-3sh
Prerequisite: PSYC 101
A comprehensive study of all factors that contribute to human development from conception to death, particularly as they relate to psychological development of individual. A survey course directed at students not planning to take PSYC 311 or 312. Students may receive credit towards the Psychology major or minor for only one of PSYC 310, 311, or 315.

PSYC 311 Child Psychology 3c-0l-3sh
Prerequisite: PSYC 101
The study of factors that influence total development and behavior of child. Current theories and research are considered, with focus upon optimum development of individual. Students may receive credit towards the Psychology major or minor for only one of PSYC 310, 311, or 315.

PSYC 312 Adult Development and Aging 3c-0l-3sh
Prerequisite: PSYC 101
A survey of physiological, cognitive, emotional, and social issues affecting the young adult, the middle-aged, and the elderly. Includes an examination of significant adult life crises.

PSYC 315 Experimental Development Psychology 3c-2l-4sh
Prerequisite: PSYC 280 or 290
Studies human development from conception to death with emphasis on the physical, cognitive, and emotional domains. Students will be involved in observation and data collection. Students may receive credit towards the Psychology major or minor for only one of PSYC 310, 311, or 315.

PSYC 320 Personality 3c-0l-3sh
Prerequisite: PSYC 101
Provides comparative analysis of major representative traditional and contemporary theories of personality.

PSYC 321 Abnormal Psychology 3c-0l-3sh
Prerequisite: PSYC 101
The description, causes, and treatment of behaviors labeled abnormal in our society are studied from experimental and clinical points of view.

PSYC 325 Psychological Testing and Measurement 3c-2l-4sh
Prerequisites: MATH 217 and PSYC 101, sophomore standing
Presents a series of focused discussions on principles, methods, and issues of psychological measurement. Also describes the major psychological tests currently in use and illustrates the administration and scoring of these tests. The laboratory activities are intended to provide hands-on experiences in computerized analysis and evaluation of psychological tests, to demonstrate test administration and scoring in practical settings, and to enhance the understanding of psychological testing through class projects. (Offered as PSYC 322 prior to 2000-01)

PSYC 330 Social Psychology 3c-0l-3sh
Prerequisite: PSYC 101
The study of the effects of the social environment on human behavior. Topics include perception of person, attitude formation and change, and small-group interaction. Students may not receive credit toward psychology major or minor for both PSYC 330 and 335.

PSYC 331 Environmental Psychology 3c-0l-3sh
Prerequisite: PSYC 101
The study of the relationship between human behavior and its environmental context. The emphasis will be on the physical environment, both natural and built.

PSYC 335 Experimental Social Psychology 3c-2l-4sh
Prerequisite: PSYC 280 or 290
A laboratory course in the effects of the social environment on human behavior. Topics include perception of persons, attitude formation and change, and small-group interaction. Includes experience with social psychological research methods. May not be taken for credit by students who have completed PSYC 330.

PSYC 341 Conditioning and Learning 3c-2l-4sh
Prerequisites: PSYC 101, 290
An examination of the basic principles of learning and related phenomena; discussion of classical conditioning, discrimination learning, and aversive control of behavior.

PSYC 342 Human Cognition: Memory and Thinking 3c-2l-4sh
Prerequisites: PSYC 101, 290
A study of methods and findings in areas of human memory and human information processing. Students may not receive credit towards the psychology major or minor for both PSYC 342 and 345.

PSYC 345 Introduction to Human Cognition 3c-0l-3sh
Prerequisite: PSYC 101
Designed to provide an overview of cognitive psychology. The Information Processing Model is contrasted with its predecessor, Behaviorism, and its contemporary challenger, Connectionism. Students may not receive credit towards the psychology major or minor for both PSYC 342 and 345.

PSYC 350 Physiological Psychology 3c-2l-4sh
Prerequisites: PSYC 101, 290
A study of the relationship between behavior and the anatomy and physiology of the nervous system. Students may not receive credit towards the Psychology major or minor for both PSYC 350 and 356.

PSYC 355 Comparative Psychology 3c-0l-3sh
Prerequisite: PSYC 101
A survey of animal behavior patterns and control mechanisms including learning, development, communication, and social behavior. An emphasis is on the relationship of the animal to its environment and on the relationship of animal models to human behavior.

PSYC 356 Biopsychology 3c-0l-3sh
Prerequisite: PSYC 101
A study of the relationship between behavior and the anatomy and physiology of the nervous system. Students may not receive credit towards the Psychology major or minor for both PSYC 350 and 356.

PSYC 371 Human Motivation 3c-0l-3sh
Prerequisite: PSYC 101
A systematic study of how behavior is initiated, sustained, directed, and terminated. Current theories in this area are critically reviewed.

PSYC 372 Drugs and Behavior 3c-0l-3sh
Prerequisites: PSYC 101 and junior standing or permission
A survey of the current knowledge concerning the actions of drugs. Topics will include legal and social issues surrounding drug use, hazard potential of commonly used drugs, review of current theories and issues regarding the use of drugs in psychotherapy, and consideration of treatment approaches for addiction.

PSYC 374 Stress and Coping 3c-0l-3sh
Prerequisite: PSYC 101
Fundamental concepts and findings in stress and stress-related disorders. Relationships of stress to disease and methods for coping with stress are presented.

PSYC 375 Mass Media and Behavior 3c-0l-3sh
Prerequisites: PSYC 101 and junior or senior status
Theory and research on the influence of the mass media on human behavior and attitudes. Topics include: the effects of news and political advertising on public opinion; the effects of racist and sexist portrayals; and the effects of violence and pornography on aggressive behavior. (Also offered as COMM 375; may not be taken for duplicate credit)

PSYC 376 Psychology of Health Behavior 3c-0l-3sh
Prerequisite: PSYC 101
An examination of the role of behavior factors in health status with a strong focus on preventive health behaviors and the role of the psychologist in promotion of health-related behavioral changes.

PSYC 378 Psychology of Death and Dying 3c-0l-3sh
Prerequisite: PSYC 101
Theories and research which delineate the psychological factors affecting the dying person as well as those persons close to one who is dying are discussed.

PSYC 379 Psychology of Human Sexuality 3c-0l-3sh
Prerequisite: PSYC 101
Provides an overview of the psychological issues and research relevant to sexuality with an emphasis on gender roles. Social, psychological, and gender perspectives are used to examine a number of topics, including contemporary sexual attitudes, sexual response, sexual relationships, sexual dysfunction, sexual variations, sexual preference, and sexual violence. Research pertaining to each topic is presented. Students are encouraged to critically evaluate research and theory and to make connections between the material and their personal experience.

PSYC 390 Industrial-Organizational Psychology 3c-0l-3sh
Prerequisites: MATH 214 or 217, PSYC 101
The study of psychological principles in work organizations; application of psychological theory to the understanding and explanation of individual behavior and experience in work organizations. May not be taken for credit by students who successfully completed PSYC 425.

PSYC 410 Historical Trends in Psychology 3c-0l-3sh
Prerequisites: PSYC 101, junior or senior standing or permission
A comprehensive overview of historical antecedents of contemporary psychology with emphasis on their implications for future developments in the field.

PSYC 411 Psychology of Women 3c-0l-3sh
Prerequisites: PSYC 101, junior or senior standing or permission of the instructor
A critical examination of the assumptions about women which are held by the discipline of psychology, considering both current research and individual experience. The psychological effects of socialization on sex role identity, achievement, interpersonal power, mental health, and critical incidents in female development are discussed in the context of relevant concepts from developmental and social psychology.

PSYC 421 Psychology of Work 3c-0l-3sh
Prerequisite: PSYC 291
The analysis, measurement, prediction, and development of human aptitude, ability, and performance in work and employment situations.

PSYC 425 Experimental Organizational Psychology 3c-2l-4sh
Prerequisite: 12sh of PSYC (including PSYC 290), beyond PSYC 101
Introduces the student to theory, research, and methods in the investigation of human behavior and experience in organizations. Both classical and current literature in the field are discussed. In addition to lecture, students will conduct empirical research projects.

PSYC 450 Introduction to Clinical Psychology 3c-0l-3sh
Prerequisites: PSYC 101, 320, 321, and permission of instructor
An overview of clinical psychology, with emphasis on clinician's use of methods of evaluation and on treatment and modification of behavior.

PSYC 480 Honors Seminar in Psychology 3c-0l-3sh
A seminar in the graduate tradition with a specialized topic. May be taken more than once to a maximum of 6sh.

PSYC 481 Special Topics in Psychology var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students. May be taken more than once to a maximum of 6sh.

PSYC 482 Independent Study in Psychology var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Individual students pursue their particular interests in psychology in consultation with a member of the staff. May be taken more than once to a maximum of 6sh. Approval is based on academic appropriateness and availability of resources.

PSYC 493 Psychological Practicum var-1-12sh
Prerequisites: PSYC 101 and department consent
Under supervision of psychology department, selected students receive experience in application of psychological techniques. May be taken more than once to a maximum of 12sh.

QBUS Quantitative/Business

Department of Management Information Systems and Decision Sciences
Eberly College of Business and Information Technology

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course. Business majors (except those majoring in Business Education) who have not achieved Junior Standing are normally not permitted to enroll in 300- or 400-level courses.

QBUS 215 Business Statistics 3c-0l-3sh
Prerequisites: MATH 121, 214
Expands upon the probabilistic concepts developed in MATH 214 to orient the student toward managerial decision making using quantitative methodologies. Topics covered include classical regression analysis, forecasting, Bayesian decision theory, linear programming, and simulation.

QBUS 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are primarily for lower-level undergraduate students.

QBUS 380 Introduction to Management Science 3c-0l-3sh
Prerequisite: QBUS 215
Discussion and application of mathematical models used in managerial decision making. Linear programming, Markov processes, queuing theory, LOQ models, and simulation techniques are among the topics covered.

QBUS 401 Forecasting Methods for Business 3c-0l-3sh
Prerequisite: QBUS 215
Designed to train the students to understand the nature of forecasting problems and the techniques of forecasting methods and their business applications. Computer statistical packages are incorporated into the course so that forecasting methods and models can be applied to real-world problems and the relationships that exist between variables can be examined.

QBUS 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

QBUS 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

RESP Respiratory Care

Department of Nursing and Allied Health Professions
College of Health and Human Services

RESP 101 The Profession of Respiratory Care 1c-0l-1sh
Introduces the student to the health care environment and specifically the respiratory care profession. Students will visit a hospital respiratory care department and observe basic respiratory patient care procedures.

RESP 326 Respiratory Care Clinical Practice I var-3sh
First exposure to patient care. An introduction to and practice of basic respiratory care treatment modalities.

RESP 327 Pharmacology 3c-0l-3sh
An introduction to pharmacology and therapeutics. An emphasis will be placed on the drugs used in respiratory care. Drug classification, action, usage, dosage, and availability will be discussed.

RESP 328 Introduction to Respiratory Care 4c-0l-4sh
Topics include medical terminology and an overview of cellular structure and function. An emphasis is placed on neurophysiology, respiratory anatomy, and physiology.

RESP 329 Respiratory Care Equipment 4c-0l-4sh
An introduction to respiratory therapy equipment, related procedures and principles, techniques and theory of mechanical ventilation. Special emphasis will be given to oxygen delivery systems and the rationale for their use.

RESP 330 Cardiopulmonary Resuscitation 2c-0l-2sh
A comprehensive analysis of the principles and practices of numerous methods of resuscitation.

RESP 333 Respiratory Care Clinical Practice II var-4sh
Treatment procedures introduced in Clinical I are continued with greater emphasis on independence. Specialty rotations are added to broaden exposure to respiratory care and critical care.

RESP 334 Respiratory Care Instrumentation and Application 4c-0l-4sh
Provides students with a comprehensive knowledge of mechanical ventilation. The care of critically ill and physiologic consequences of mechanical ventilation will be discussed.

RESP 335 Patient Care Skills 3c-0l-3sh
An overview of the history of respiratory care and nursing. Topics include medical records, infection control, sterilization, and psychosocial aspects of illness.

RESP 336 Cardiopulmonary Evaluation and Clinical Correlation 4c-0l-4sh
Disease states of the pulmonary and related systems are investigated in progression from etiology through treatment and prognosis.

RESP 337 Introduction to Pulmonary Function Studies 1c-0l-1sh
The student is introduced to the basic principles of lung volumes, capacities, and their measurement. Blood gas sampling and electrodes are also explored.

RESP 342 Preceptorship in Respiratory Care 1c-0l-1sh
Prerequisites: RESP 326, 328, 329, 330, permission
An opportunity for students to gain additional clinical experiences in a supervised health care setting. Must meet university and sponsoring preceptorship requirements. May be repeated for a maximum of 5sh. A minimum of 40 hours is required for each credit.

RESP 425 Clinical Case Studies 3c-0l-3sh
Designed to increase the working knowledge of disease states commonly experienced by patients in the critical care setting. An emphasis is placed on recognition and treatment of various disease states. Methods for evaluation and treatment of clinical oxygenation disturbances and acid-base disorders will be explored. Clinical simulations, case studies, and patient management problems reviewed and discussed. The emphasis is on appropriate information-gathering and decision-making techniques.

RESP 426 Respiratory Care Clinical Practice III var-5sh
Respiratory care treatment procedures are continued with emphasis on improving proficiency and refining skills. Students will make rounds with physicians.

RESP 428 Essentials of Electrocardiography 2c-0l-2sh
Designed to acquaint the student with basic principles in cardiac electrodiagnostics. Topics include the technique of ECG testing and fundamentals of ECG arrhythmia recognition.

RESP 429 Design and Function of a Respiratory Care Program 2c-0l-2sh
Basic management principles as they apply to the hospital setting; in particular, respiratory care departments and schools will be discussed.

RESP 430 Pulmonary Function Studies 3c-0l-3sh
Prerequisite: RESP 337
Introduces the student to the advanced diagnostic studies and equipment necessary for diagnosing and quantifying the various lung diseases. Included are advances in invasive studies and rehabilitation evaluation tools.

RESP 431 Pediatric Respiratory Care 1c-0l-1sh
Prerequisites: RESP 334 and 336
The application of respiratory care to children ages six months to fifteen years is explored. Cardiopulmonary pathophysiology and treatment for the following disorders are discussed: Croup, Epiglottitis, Asthma, Cystic Fibrosis, Congenital Heart Defects, Abdominal and Chest Wall Defects.

RESP 433 Respiratory Care Clinical Practice IV var-5sh
Rotations on treatment and intensive respiratory care are continued. Advanced rotations are included.

RESP 434 Neonatal Respiratory Care 3c-0l-3sh
Basic terminology, anatomy, and pathophysiology of obstetric, fetal, neonatal, and pediatric patients will be presented.

RESP 436 Respiratory Care Teaching 2c-0l-2sh
An introduction to respiratory education.

RESP 437 Methods in Critical Care 2c-0l-2sh
Critical Care diagnostic and therapeutic modalities pertinent to respiratory care will be discussed. Topics include invasive and noninvasive cardiac monitoring, pulmonary monitoring, neurological assessment, ventilator commitment, and discontinuance.

RESP 438 Cardiopulmonary Rehabilitation 1c-0l-1sh
Techniques and principles associated with cardiopulmonary rehabilitation programs are surveyed. Topics also include the management of chronic pulmonary disease in the home and the application of respiratory equipment and mechanical ventilators in this setting.

RESP 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

RGPL Regional Planning

Department of Geography and Regional Planning
College of Humanities and Social Sciences

RGPL 213 Cartography I 3c-0l-3sh
Introduces students to principles of thematic map construction. The emphasis is on the techniques of choropleth mapping and the production of scientific graphs and charts. (Also offered as GEOG 213; may not be taken for duplicate credit)

RGPL 281 Special Topics 3c-0l-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students. (May also be offered as GEOG 281; may not be taken as duplicate credit under same title)

RGPL 313 Cartography II 3c-0l-3sh
Prerequisite: RGPL 213
Gives an understanding of the compilation and use of maps and quantitative data. Develops skills essential to the construction of various types of maps. (Also offered as GEOG 313; may not be taken for duplicate credit)

RGPL 314 Map and Photograph Interpretation 3c-0l-3sh
Maps and air photographs, along with remote sensing materials, permit inventory and analysis of geologic, land use, urban development, and other landscape phenomena. The understanding of these materials and associated tools for their use is presented. (Also offered as GEOG 314; may not be taken for duplicate credit)

RGPL 316 Introduction to Geographic Information Systems 3c-0l-3sh
Prerequisite: RGPL 213, or equivalent, or permission of instructor
Automated methods for creating, maintaining, and analyzing spatial data are presented. Topics include 1) specialized GIS hardware and software, 2) vector vs. raster vs. object-oriented spatial data structures, 3) creation and manipulation of geographic data files, 4) database design and management concepts, 5) spatial analysis, and 6) cartographic design. (Also offered as GEOG 316; may not be taken for duplicate credit)

RGPL 332 Urban Geography 3c-0l-3sh
Basic concepts of urban geography including site, situation, function, urban land use, urban structure, and urban hierarchy are introduced. Relationships between urban geography and urban planning are explored. (Also offered as GEOG 332; may not be taken for duplicate credit)

RGPL 333 Trade and Transportation 3c-0l-3sh
Deals with the spatial aspects of transportation systems and their use. Circulation, accessibility, time and distance concepts, and trade patterns are discussed. (Also offered as GEOG 333; may not be taken for duplicate credit)

RGPL 350 Introduction to Planning 3c-0l-3sh
An introduction to the profession and activity of contemporary American urban and regional planning. Course emphasis is placed on land use control, design, growth management, and development regulation. The legal and institutional bases of planning practice are covered as well. (Offered as GE 360 Introduction to Planning prior to 1996-97)

RGPL 352 Planning Methods 3c-0l-3sh
Research, analytical design, and plan-making techniques in urban and regional planning. Examines basic items necessary to prepare urban and regional comprehensive plans. (Also offered as GEOG 352; may not be taken for duplicate credit) (Offered as GE361 Planning: Basic Studies and Analysis prior to 1996-97)

RGPL 353 Planning Design I 3c-01-3sh
Introduces students to professional graphic communications. An emphasis is placed on the use of 2-D Computer Aided Design (CAD) applications, plan graphics, and professional standards to represent and solve basic physical planning problems.

RGPL 412 Research Seminar 3c-0l-3sh
Prerequisite: RGPL 468
This senior seminar and workshop is a capstone course that focuses on recent research in the major field. Students carry out a research project on a topic of local or regional importance. (Also offered as GEOG 412; may not be taken for duplicate credit) (Offered as GE 312 Research in Geographical Planning prior to 1996-97)

RGPL 415 Remote Sensing 3c-0l-3sh
Deals with air photographs, satellite imagery, thermal sensing, and radar imagery and their application to deriving information about the earth's physical and cultural landscapes. (Also offered as GEOG 415; may not be taken for duplicate credit)

RGPL 417 Technical Issues in GIS 3c-0l-3sh
Prerequisite: RGPL 316
A project-based class in which students learn the skills to develop and maintain a Geographic Information System. Through cooperative learning students will design and implement functional systems. Methods for designing GIS systems to user specification, data collection, data input, project management, and system documentation are covered. (Also offered as GEOG 417; may not be taken for duplicate credit)

RGPL 454 Planning Design II 3c-0l-3sh
Prerequisites: RGPL 350, RP353 or instructor's permission
Introduces students to the activity of design, design programming, design decision making, and design communications. Focuses specifically on the development of site planning, site analysis, and site design skills as well as the translation of design program elements into physical form. (Offered as GE 463 Planning: Design prior to 1996-97; and RGPL 354 Planning Design prior to 2000-01)

RGPL 458 Land Use Law 3c-0l-3sh
Prerequisite: RGPL 350
Introduces students to principles of land use law. Focus is on federal constitutional principles and key Supreme Court cases, especially as they relate to actions of local units of government and municipal planning practice. Deals with the present state of land use law and with current trends and issues.

RGPL 464 Land Use Policy 3c-0l-3sh
Prerequisite: RGPL 350
Introduces students to and provides an overview of land use issues at the regional, state, and federal levels. An emphasis is placed upon the evolution of contemporary policy strategies, constitutional issues, and regional controversies involved in the regulation of metropolitan growth, central city decline, and management of public lands. (Also offered as GEOG 464; may not be taken for duplicate credit)

RGPL 468 Planning Theory 3c-0l-3sh
Prerequisites: RGPL 350, 352, 454, or permission of instructor
Seminar on contemporary debates concerning planning traditions, principles, and practices. The activity of planning is investigated from several theoretical frames and analytic positions. (Offered as GE 462 Planning: Development, Principles, and Theory prior to 1996-97)

RGPL 481 Special Topics 3c-0l-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students. (May also be offered as GEOG 481; may not be taken for duplicate credit under same title)

RGPL 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

RGPL 493 Internship var-1-12sh
Professional learning experience with emphasis on application of academic background. Open to majors and minors in regional planning with a total of 57sh and 15sh in the major. See internship supervisor for additional information.

RHAB Rehabilitation

Department of Special Education and Clinical Services
College of Education and Educational Technology

RHAB 200 Introduction to Rehabilitation 3c-0l-3sh
A foundation for subsequent courses in the rehabilitation sequence. It is also available as a prerequisite or basic course for students interested in the rehabilitation of individuals in our society. Content includes the philosophy, history, major concepts, and current problems and issues.

RHAB 211 Medical Aspects of Rehabilitation 3c-0l-3sh
Provides an overview of the etiology and pathology of a range of medical disorders which often require rehabilitative services. An emphasis is placed upon the psychosocial and functional effects of these disorders, vocational implications, and rehabilitative needs.

RHAB 220 Neurological Basis of Disability 3c-0l-3sh
Prerequisites: EDEX 111, RHAB 200, BIOL 155 or HP221
A study of the brain and spinal cord with emphasis on cortical and subcortical mechanisms instrumental in normal motion, coordination, and bodily sensation, exclusive of vision and hearing. A discussion and demonstration of conditions of cerebral palsy, poliomyelitis, traumatic paraplegics, cerebrovascular accident, Parkinson's disease, multiple sclerosis, and rehabilitative procedures.

RHAB 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

RHAB 312 Psychological Basis of Disability 3c-0l-3sh
A study of emotional and social responses which govern behavior and relationships of handicapped individuals and rehabilitation workers alike, with emphasis on the role of disability in formation of the concept of human worth.

RHAB 321 Principles and Methods of Rehabilitation 3c-0l-3sh
Prerequisites: RHAB 220, 312, and permission of instructor
Delineates the roles of members of professional disciplines of medicine, psychology, prosthetics, orthodontics, audiology, speech pathology, physical and occupational therapy in restoration of the handicapped; use of diagnostic information; significance and interpretation of medical examination; role of rehabilitation counselor in the agency.

RHAB 322 Rehabilitation Case Study and Interpretation 3c-0l-3sh
Prerequisites: RHAB 220, 312, or permission of instructor
Purpose and techniques of case history taking; meaning and evaluation of diagnostic information; psychological evaluation in terms of mental ability, personality, attitudes, and dexterity skills; role of disabled individual's family in planning of services; referrals and report writing.

RHAB 360 Rehabilitation Counseling: Strategies 3c-0l-3sh
Prerequisites: Permission. Rehabilitation majors only
Designed to help students develop competencies in using various counseling techniques with handicapped persons. Various theories of counseling will be explored relative to the rehabilitation setting. It will provide basic counseling skills to upperclass Rehabilitation majors prior to field training.

RHAB 410 Vocational Assessment in Rehabilitation Counseling 3c-0l-3sh
Prerequisites: EDEX 111, RHAB 220, or faculty permission
Provides students with an overview of vocational assessment techniques and instruments for use with rehabilitation clients who are blind, deaf, mentally retarded, or severely physically handicapped. Includes discussion of rehabilitation evaluation.

RHAB 412 Occupational Aspects of Rehabilitation 3c-0l-3sh
Prerequisite: RHAB 220 or permission of instructor
The realism of the world of work and relationship of gainful employment to human autonomy and decision making. Types of jobs, levels of required skills, potential capabilities of the disabled relative to specific job responsibilities, methods of assessing potential job success, and sheltered workshops.

RHAB 422 Current Topics in Rehabilitation 3c-0l-3sh
Taken concurrently with RHAB 488 and 493. A discussion of current topics of interest in the field, such as state and federal legislation, new prosthetic advances, proposals of the National Rehabilitation Association, or recent techniques in working with specific disabilities.

RHAB 460 Advanced Rehabilitation Counseling 3c-0l-3sh
Prerequisite: RHAB 360
Selected counseling techniques studied and practiced under supervision. Application will be utilized in roles that will approximate the kind of clients encountered in field training.

RHAB 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

RHAB 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

RHAB 484 Directed Rehabilitation Activities var-3sh
Prerequisites: Permission, Rehabilitation majors only
A pre-field training experience working with handicapped clients in local facilities. Concrete experience will help the students integrate classroom instruction with field experiences.

RHAB 488 Field Training in Rehabilitation I var-6sh
Prerequisite: All major courses in program
Taken concurrently with RHAB 422 and 493. Emphasizes development of the student rehabilitation coordinator by working with disabled clients in a public or private agency. Writing and analysis of case reports, counseling of clients, understanding of agency responsibilities and limitations, referral, follow-up, and final evaluation of the client's ability to function with various degrees of autonomy.

RHAB 493 Field Training in Rehabilitation II var-6sh
Prerequisite: All major courses in program
Taken concurrently with RHAB 422 and 488. Provides a second field experience.

RLST Religious Studies

Department of Philosophy and Religious Studies
College of Humanities and Social Sciences

RLST 100 Introduction to Religion 3c-0l-3sh
An introduction to the academic study of religion through an examination of various dimensions of religious expression and traditions. Covers such areas as problems about definition of religion; approaches to the study of religion; the goals, language, and rituals of religion; cases of religious experience; faith, disbelief, and alternatives to religion; religion and the sociocultural context.

RLST 110 World Religions 3c-0l-3sh
A comparative study of the history, teaching, and rituals of the major religions of the world and their influence on contemporary society. A nonsectarian approach to religions such as Native American religion, Afro-American religion, Judaism, Christianity, and Islam in relationship to Hinduism, Buddhism, Confucianism, Taoism, and Shinto.

RLST 200 Religion and Culture: Their Interaction 3c-0l-3sh
A systematic study of the interaction of religions and various components of culture, as a way of understanding the phenomenon of religion. The approach is functional and descriptive; it uses case studies which are chronologically and culturally diverse, covering such areas as religion and politics, economics, arts, science, and literature.

RLST 210 World Scriptures 3c-0l-3sh
Major sacred writings of Hindu, Buddhist, Zoroastrian, Moslem, Confucian, Taoist, and Judeo-Christian traditions will be studied from point of view of their religious significance.

RLST 250 Understanding the Bible 3c-0l-3sh
An introduction to scholarly methods and major themes necessary to understand the Hebrew Scriptures and the New Testaments of the Judeo-Christian tradition.

RLST 260 American Religious Development 3c-0l-3sh
A survey and analysis of topics which depict the role of religion in the U.S., e.g., American Indian religion; religion and the discovery/colonization/immigration trends of the U.S.; religion and the Constitution; indigenous religious movements; black religion; ecumenism; atheism; cults; mass media and religion; religion in Indiana County.

RLST 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

RLST 290 Christianity 3c-0l-3sh
A study of the beliefs, practices, significant persons, history, and cultural impact of Christianity.

RLST 311 Eastern Philosophy 3c-0l-3sh
An examination and critique of the philosophies which have shaped Eastern world views and ways of life as found in a representative sampling of Chinese, Japanese, and Indian thought.

RLST 312 Archaeology and the Bible 3c-0l-3sh
An investigation of religious-historical traditions of the Bible in light of archaeological research. Includes a study of archaeological method and interpretation, discoveries in Egypt, Mesopotamia, and Syro-Palestine as background for understanding the traditions and religious practices and beliefs of Israel, and special questions surrounding the Patriarchal narratives, the Exodus and Conquest, Israel under David and Solomon, the Dead Sea Scrolls, and New Testament times.

RLST 329 Philosophy of Religion 3c-0l-3sh
A philosophical critical examination of religion to include: the nature of religion; religious argumentation; existence and nature of God; meaning and relation of faith and knowledge; theories of origin or religion.

RLST 360 African Religions 3c-0l-3sh
An examination of the nature of African traditional religion and how traditional religion, Islam, and Christianity coexist and influence each other.

RLST 365 Native North American Religions 3c-0l-3sh
An introduction to the indigenous religions of North America and to the peoples who practice these rich and varied approaches to the sacred. This course not only examines major religious themes and dimensions (myth, ritual, ethics, etc.) but includes a historical perspective on North American Indian lifeways. This perspective involves discussion of the clash with Euro-American values and contemporary native religions responses to social crisis and change.

RLST 370 Religions of China and Japan 3c-0l-3sh
A study of Confucianism, Taoism, Buddhism, Shinto, and popular religion in China and Japan, including historical and theological foundations, development of thought, contemporary expressions, and encounters with the modern world.

RLST 375 Religions of India 3c-0l-3sh
A study of Hinduism, Indian Buddhism, Jainism, and Sikhism, including historical and theological foundations, development of thought, contemporary expressions, and encounters with the modern world.

RLST 380 Islam 3c-0l-3sh
A study of Islam including historical and theological foundations, developments of thought, contemporary expressions, and encounters with the modern world.

RLST 410 Early Christian Thought 3c-0l-3sh
The development of Christian thought approached through an in-depth study of selected writings from the early Church Fathers to the Protestant Reformers.

RLST 440 Modern Christian Thought 3c-0l-3sh
An examination of Christian thought, approached through in-depth study of selected writings from major theologians of the nineteenth and twentieth centuries.

RLST 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

RLST 482 Independent Study var-1-6sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Individual students wishing to pursue religious studies interests not covered in the department's regular offering may do so by approval. Upon approval students are guaranteed at least five hours of faculty time per semester hour. All programs of study must be accepted by the department as a whole. May be taken more than once to maximum of 6sh. (This option is available to both Religious Studies majors and nonmajors.)

RLST 482 Independent Study: Honors 3c-0l-3sh
Prerequisites: 3.00 GPA, 15sh in Religious Studies, and 3.20 GPA in departmental courses
Majors in Religious Studies are invited to take 3sh of independent study-designated Honors Project. Upon satisfactory completion, graduation with departmental honors is possible.

RLST 493 Internship in Religious Studies 6-12sh
Prerequisites: Junior or senior; Religious Studies major or double major; 2.5 GPA in major; department approval
A supervised experience in a public or private organization which extends and complements coursework in Religious Studies.

SAFE Safety Sciences

Department of Safety Sciences
College of Health and Human Services

SAFE 101 Introduction to Occupational Safety and Health 3c-0l-3sh
Covers the theory and history of occupational hazard control, effects of hazards and failures on organizational control and productivity, safety and health legislation, and accident causation. Also previews aspects of recognizing, evaluating, and understanding control of safety and health hazards, acquiring hazard data, and the use of hazard analytical tools. Communication techniques in safety and health management are stressed, along with the development of safety and health programs.

SAFE 102 Introduction to Mine Safety and Health 3c-0l-3sh
Designed to provide the student with an in-depth background of the problems involving mine safety. A historical approach to coal and mineral mining is reviewed; legislative influences such as the Federal Coal Mine Health and Safety Act, the Metal and Nonmetal Mine Health and Safety Act, and the Occupational Safety and Health Act are discussed in depth; mining techniques, methods, and systems are discussed. Management of mine health and safety programs is presented. Federally mandated training of employees is covered. (Offered occasionally)

SAFE 111 Principles of Industrial Safety I 3c-0l-3sh
Prerequisite: SAFE 101
Stresses an understanding of the complexity of the industrial hazard control problem by thoroughly examining elements of safety and health enumerated in the OSHA promulgated standards and various consensus standards. The emphasis will be directed at plant layout and design, powered industrial vehicles, boilers and unfired pressure vessels, machine guarding, robotics safety, and an introduction to industrial processes.

SAFE 145 Workplace Safety Today and Tomorrow 3c-0l-3sh
Prerequisite: Non-Safety Sciences major
Introduces workplace safety, health, and environmental aspects to students with limited knowledge of the subject. Includes the historical development of safety and health regulations, the impact of injury on society, identifying and evaluating hazards, and hazard controls in specific industrial processes, basic principles of loss management, and the future of safety, health, and environmental regulations.

SAFE 210 Environmental Safety and Health Regulations 3c-0l-3sh
Prerequisites: CHEM 102, SAFE 101, or permission of instructor
Offers the student a practical approach to the understanding of, and compliance with, the various environmental regulations that impact on business. A thorough discussion of the definitions, categories, and evaluation of hazardous materials is included. Environmental laws covered include the Clean Water Act, the Clean Air Act, the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, the Compensation and Liability Act, the Occupational Safety and Health Act, and other related laws.

SAFE 211 Principles of Industrial Safety II 3c-3l-4sh
Prerequisite: SAFE 111
Stresses an understanding of the complexity of the industrial hazard control problem by thoroughly examining elements of safety and health enumerated in the OSHA promulgated standards and various consensus standards. An emphasis is placed on personal protective equipment, welding and cutting, walking and working surfaces, materials handling and storage, electrical safe work practices, and construction safety. Application of hazard control strategies is accomplished in laboratory sessions.

SAFE 231 Principles of Mine Safety I 3c-0l-3sh
Prerequisite: SAFE 102
Focuses on the various aspects of mining operations such as slope and shaft development; mine design; ground control; hoisting; man-trips; haulage; mining equipment; mine emergency planning and procedures; mine communications and maintenance. (Offered occasionally)

SAFE 232 Principles of Mine Safety II 3c-0l-3sh
Prerequisite: SAFE 102
Covers surface mining operations such as slope stability, equipment, ground water, and control. Mine-related processing operations are discussed. Provides an in-depth study of the various controls of electrical hazards and ignition sources such as permissible equipment and electrical distribution systems. The uses of explosives and blasting practices, handling, storing, and transportation with emphasis on causes of explosion involving dust and gases are discussed. (Offered occasionally)

SAFE 245 Product Safety 3c-0l-3sh
Prerequisite: MATH 217
Traces flow of applicable legislation dealing with consumerism and product safety. Corporate liability for product safety emphasized through case studies. Students are familiarized with the evolving role of Consumer Product Safety Commission. Corporate management of product development and safety detailed with emphasis on systems safety analysis, standards, and product testing.

SAFE 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

SAFE 299 Experience in Cooperative Education I 0c-0l-0sh
Prerequisites: GPA of 2.0 or better, SAFE 101, 111; approval of academic advisor, co-op coordinator, and department chairperson
Provides the initial experience in a program designed to combine classroom theory with practical application through job-related experiences. Open to SAFE majors and minors in their sophomore year. Students are employed by organizations where there is an ongoing hazard control program under the direction of an experienced safety professional.

SAFE 301 Health Hazard Identification 3c-0l-3sh
Prerequisites: BIOL 155, CHEM 102, MATH 121, PHYS 111
Provides an understanding of the primary health hazards found in industry and their effects on the human body. Students learn to recognize hazards involved with air contaminants, noise, heat, radiation, chemicals on the skin, and other stressors. An emphasis is placed on the study of occupational disease, industrial toxicology, and use of threshold limit values.

SAFE 303 Control of Health Hazards 3c-0l-3sh
Prerequisites: MATH 217, PHYS 112, SAFE 301
A study of engineering, administrative, and personal protective equipment as methods of reducing or eliminating hazards to the health of industrial workers. Topics covered include industrial ventilation, noise control, heat control, radiation control, personal protective equipment, and industrial health program.

SAFE 311 Industrial Fire Protection 3c-0l-3sh
Prerequisites: CHEM 102, PHYS 112, SAFE 211
Introduces fundamental concepts in protection of industrial workers and property from fire and explosion. Fire chemistry, control of ignition sources in industry, and properties of combustible materials are discussed. Fire detection and extinguishment are covered along with building construction for fire prevention, life safety, fire codes, and related topics.

SAFE 345 Systems Safety Analysis 2c-3l-3sh
Prerequisites: MATH 217, SAFE 211
Focuses on the evaluation of system designs using detailed system analysis techniques. Topics covered include system definition, economics of systems safety, systems safety methodology, mathematics of systems analysis including statistical methods, Boolean Algebra, and reliability. Skills gained include the ability to perform preliminary hazard analysis, failure mode and effect analysis, fault tree analysis, and exercises in the application of fault tree analysis to hardware and man/machine systems. Practical analysis work is accomplished in laboratory sessions.

SAFE 347 Ergonomics 2c-3l-3sh
Prerequisites: BIOL 155, SAFE 301
An exploration of the principles which control human performance and its effect upon the safety and reliability of systems. Engineering anthropometry, human perception, biomechanics of motion and work posture, work physiology, and human performance measurement are covered in the context of their application in workplace design. Students will be instructed in methodologies for analysis of tasks and human performance requirements. Important human limitations and ergonomic hazard evaluations, such as lifting and repetitive motion tasks, are studied in laboratory sessions.

SAFE 370 Fleet Safety 3c-0l-3sh
Prerequisites: SAFE 101, junior standing
Includes topics involved with the development and operation of motor fleet safety programs: driver selection and training, accident investigation and recordkeeping, equipment safety features, preventive maintenance, and driver incentive programs.

SAFE 380 Institutional Safety Management 3c-0l-3sh
Prerequisite: Junior standing
Historical aspects of safety for both private and public institutions; introduction to trends in liability and institutional safety regulations. Distinctions will be made between employee, visitor, and patient hazards and their control.

SAFE 399 Experience in Cooperative Education II 0c-0l-0sh
Prerequisites: SAFE 299 and GPA of 2.0 or better
Represents the second experience in a program designed to combine classroom theory with practical application through job-related experiences. Open to SAFE majors and minors before completing the required Safety Sciences internship or achieving senior status for minors. Students are employed by organizations where there is an ongoing hazard control program under the direction of an experienced safety professional.

SAFE 401 Mine Ventilation 2c-3l-3sh
Prerequisites: MATH 122, PHYS 112, SAFE 102, or consent
A study of mine ventilation principles and practices which provide a basic knowledge in design and operation of mine ventilation systems. The topics of airflow physics, ventilation standards, fan fundamentals, pressure losses, required air flows, and overall design are discussed. Specific problems in mine ventilation will be solved. (Offered occasionally)

SAFE 402 Health Hazard Evaluation 2c-3l-3sh
Prerequisites: MATH 217, PHYS 112, SAFE 301
A lecture/laboratory course which provides a basic understanding of techniques used in measuring and evaluating the magnitude of health hazards in industry. Laboratory sessions provide experience in air sampling, noise measurement, heat measurement, particle size analysis, chemical analysis, and evaluation of industrial ventilation systems.

SAFE 412 Hazard Prevention Management 3c-3l-4sh
Prerequisites: MATH 217, MGMT 311, junior standing
Teaches various safety management techniques to identify and prevent the occurrence of hazardous behavior and conditions. Devises methods capable of extracting accurate, meaningful data, of collecting, codifying, and processing hazard and loss incident information, and of utilizing data retrieval systems used in cost/benefit decision-making for hazard prevention, safety program and performance evaluation, and risk management.

SAFE 441 Accident Investigation 3c-0l-3sh
Prerequisites: SAFE 101, junior standing or consent
Focuses on various aspects of accident investigation such as recent theories associated with accident causes, investigative techniques, data acquisition, structure of investigative reports, management responsibilities, and remedial actions. Particular emphasis on determining sequence of events to develop management actions which will prevent recurrence of accidents.

SAFE 461 Air Pollution 3c-0l-3sh
Prerequisite: SAFE 301 or consent
Focuses on various major aspects of the air pollution problem. Includes sources of pollution, evaluation and engineering of pollutants, government regulations, atmospheric chemistry and dispersion, and human and nonhuman effects. Particular emphasis on information that is practical for the safety management, industrial health, or environmental health professional.

SAFE 462 Radiological Health 3c-0l-3sh
Prerequisite: SAFE 301 or consent
A study of problems associated with ionizing radiation in human environment. An emphasis is given to biological effects, radiation measurement, dose computational techniques, exposure control, and local and federal regulations. Study and use of various radiological instruments included.

SAFE 465 Right-to-Know Legislation 3c-0l-3sh
Prerequisites: SAFE 301, 311, or permission of instructor
Covers both the federal and selected state right-to-know laws and related legislation. The scope, application, and enforcement of the various laws, including specific legal and moral obligations, are discussed. Strategies are explored and developed to identify the means by which employers can gain compliance with regulatory requirements.

SAFE 472 Process Safety in the Chemical Industry 3c-0l-3sh
Prerequisites: SAFE 301, 311, 345, and senior standing, or permission of instructor
Designed to cover all important aspects of loss prevention as it is practiced in the chemical process industries. Its objective is to prepare the safety professional so that he/she may be able to work more effectively with chemists and chemical engineers in joint hazard identification, evaluation, and control projects.

SAFE 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

SAFE 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

SAFE 488 Internship 12sh
Prerequisites: Senior standing, all required courses in major, minimum 2.8 cumulative GPA and 3.0 GPA in major, and consent
A practicum conducted at an approved occupational setting up to 500 miles away from IUP. Students are required to conduct four major projects. One project will be from each of the following areas: Safety Management, Industrial Safety, Industrial Hygiene, and Fire Protection. Students are accountable to an on-site supervisor and are required to remain in close contact with a Safety Sciences faculty coordinator.

SAFE 493 Internship var-6sh
Prerequisites: Senior standing, all required courses in major
All Safety Sciences majors are expected to take this course. It is conducted away from the university at various industrial enterprises. Students are required to provide their own transportation. Intended to allow the student to apply hazard assessment and safety management practices to actual industrial situations while at same time being exposed to complexities of industrial environment.

SCI Science

College of Natural Sciences and Mathematics

SCI 101 Fundamentals of Physics 2c-2l-2.5sh
Prerequisite: Elementary Education major or instructor permission
A conceptual course in physics for Elementary Education majors. High school physics is not a prerequisite. Class and lab presentations concentrate upon dispelling naive concepts and developing a better understanding and appreciation of the physical world. The topics of motion, heat, light, sound, electricity, magnetism, and the nucleus are presented in context with our everyday experiences. Does not fulfill the Liberal Studies requirement except for majors in Elementary and Early Childhood Education.

SCI 102 Fundamentals of Chemistry 2c-2l-2.5sh
Prerequisite: Elementary Education major or instructor permission
A survey of chemical principles and concepts. The nature of chemical reactions as applied to technology and its applications to society. The world of consumer chemistry will be explored. The goal is to develop a chemical literacy for the student. A series of laboratory exercises develops concept understanding and process skills. Some individual and group projects will be included. Does not fulfill the Liberal Studies requirement except for majors in Elementary and Early Childhood Education.

SCI 103 Fundamentals of Earth and Space Science 2c-2l-2.5sh
Prerequisites: SCI 101, 102
An introduction to geology, astronomy, oceanography, and meteorology for Elementary Education majors. An emphasis is placed on the understanding of large-scale processes and how the earth, solar system, and universe work. Lab experiences include hands-on work with earth materials and with instruments from all of our subjects, map, and field trips which may occur during class times, nights, and weekends. Does not fulfill the Liberal Studies requirement except for majors in Elementary and Early Childhood Education.

SCI 104 Fundamentals of Environmental Biology 2c-2l-2.5sh
Prerequisites: SCI 101, 102
A basic introduction to the major concepts and principles of ecology and their application to modern living for majors in Elementary and Early Childhood Education.

SCI 105 Physical Science I 3c-2l-4sh
A descriptive and conceptual course in physics for the non-Science major. High school physics is not a prerequisite. Content is designed to develop an understanding and appreciation of the physical world around us, to produce changes in attitude and background essential for our modern society, and to clarify the following topics: motion, heat, sound, light, electricity, magnetism, and the structure of matter.

SCI 106 Physical Science II 3c-2l-4sh
A basic course in environmental and consumer chemistry for the non-Science major. High school chemistry is not a prerequisite. Major topics include humankind's use and abuse of soil, water, air, and energy resources, global food production and hunger, the nuclear industry, and the threat of nuclear war. Consumer topics include vitamins and nutrition, food additives, pesticides, and drugs.

SCI 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

SCI 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

SCI 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

SOC Sociology

Department of Sociology
College of Humanities and Social Sciences

SOC 151 Principles of Sociology 3c-0l-3sh
A scientific study of structure and functioning of human societies, with special attention to factors responsible for the organization and transformation of sociocultural systems. Specific course content varies from one instructor to another.

SOC 231 Contemporary Social Problems 3c-0l-3sh
An exploration of some pressing problems currently endemic to Western society. Problems are defined and solutions explored in light of historical, political, economic, social, and anthropological data.

SOC 233 Language and Culture 3c-0l-3sh
Focuses on social and cultural functions of language. Particular emphasis on analysis of non-Western languages.

SOC 251 Sociology of Human Sexuality 3c-0l-3sh
An in-depth analysis of a formerly taboo topic, human sexuality. Current information from biological, psychological, and sociological research on human relationships is presented to provide a foundation for self-understanding and societal values.

SOC 271 Cultural Area Studies: Africa 3c-0l-3sh
Explores the cultural diversity of the continent of Africa. The first unit examines the historical processes which shape modern society, including the formation of indigenous African empires, the evidence for trade routes, slave trading, and colonialism. The second unit examines the nature of African traditional societies, including analyses of forager and agricultural groups. The last unit covers issues of contemporary development in Africa such as famine and agricultural policy, the status of women in economic development, and apartheid. Reading includes ethnographic and historical accounts of African society as well as selections by African writers on the issues of contemporary society. (Also offered as ANTH 271; may not be taken for duplicate credit)

SOC 272 Cultural Area Studies: China 3c-0l-3sh
Designed to assist the student in developing an understanding of contemporary China. While the course will begin with prehistoric and historic aspects of China, the focus will be on contemporary issues presented in the context of sociological theory. Specific Chinese cultural components that will be investigated include values, attitudes, norms, social organization, linguistics, and folklore. (Also offered as ANTH 272; may not be taken for duplicate credit)

SOC 273 Cultural Area Studies: Southeast Asia 3c-0l-3sh
An introduction to the peoples and cultures of Southeast Asia. Prehistory and the development of indigenous states in Southeast Asia and analysis of impact of world religions, such as Islam, and Western colonialism. Also examines models of hunter-gatherer and farming societies and discusses contemporary issues in social and economic change, including the "Green Revolution," tropical deforestation, the struggle of ethnic minority tribal peoples, and the plight of Indochinese refugees. (Also offered as ANTH 273; may not be taken for duplicate credit)

SOC 274 Cultural Area Studies: Latin America 3c-0l-3sh
An introduction to the peoples and cultures of Latin America. Focuses on the prehistory and development of pre-Columbian complex societies in Mesoamerica and the Andes and analyzes the impact of European colonialism on these major regions. Also examines contemporary issues, such as civil wars, economic development, rural-urban migrations, and migration and immigration of Latin American peoples into the United States. (Also offered as ANTH 274; may not be taken for duplicate credit)

SOC 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

SOC 286 Marriage, Kinship, and the Family 3c-0l-3sh
Sociological and anthropological study of patterns of marriage, kinship, and family life, with emphasis on the relationship between family patterns and other social institutions. Topics covered include the family and marriage in historical and comparative perspective; worldwide patterns of gender stratification; incest and incest avoidance; class and race contexts of family patterns; mate selection and love; parenthood and child rearing; domestic and sexual violence; alternative family lifestyles; and the current crisis and possible future of the family. Intended for a broad audience but also open to sociology and anthropology majors and minors. (Also offered as ANTH 286; may not be taken for duplicate credit)

SOC 301 Foundations of Sociological Practice 3c-0l-3sh
Prerequisite: SOC 151
Introduces students to the field of sociological practice and develops an understanding of the relevance of micro and macro sociological theory to understanding human problems. Focuses on applications of sociological theory and methods to the helping professions and especially to understanding the interactional aspects of the relationship between service users and service providers. Also acquaints students with the structure of the human service system in American society.

SOC 302 Clinical Sociological Practice 3c-0l-3sh
Prerequisite: SOC 301
Prepares the student to effect constructive change within individuals, groups, families, and communities. Draws its analysis, diagnosis, and methods from the foundations of sociological theory at the level of intervention with clients.

SOC 303 Social and Cultural Change 3c-0l-3sh
Prerequisite: SOC 151
An exploration of current theoretical perspectives on social and cultural change. Special attention given to planned change at the local or regional level.

SOC 314 Native Americans 3c-0l-3sh
A survey of culture history and culture area characteristics of Native Americans of North America. A detailed study of representative groups related to historical, functional, and ecological concepts.

SOC 320 Sociological Theory 3c-0l-3sh
Prerequisites: SOC 151 and second-semester sophomore standing
A detailed survey of the historical development of sociological theory from the mid-nineteenth century to the present. Treats the classical theorists Marx, Durkheim, and Weber and such contemporary theoretical schools as functionalism, Marxian and Weberian conflict theory, cultural materialism, social evolutionism, rational choice theory, symbolic interactionism, ethnomethodology, sociobiology, structuralism, and postmodernism. Students are encouraged to take this course in the second semester of their sophomore year or during their junior year.

SOC 333 Delinquency and Youth 3c-0l-3sh
Prerequisite: SOC 151
A study of social and cultural factors involved in various youth lifestyles, including delinquency. Cross-cultural and historical approach used in a review of social norms, social control, and socialization institutions and community-based programs for rehabilitation.

SOC 335 Alcohol and Drug Abuse 3c-0l-3sh
Prerequisite: SOC 151
Examines the social issues and problems of alcohol and drug misuse in American society. Legal and illegal substances will be considered, and the causes of substance abuse as well as alternatives will be examined.

SOC 336 Sociology of the Family 3c-0l-3sh
Prerequisite: SOC 151
Sociological study of the family from various theoretical viewpoints. Special emphasis will be placed on the contemporary American family. A variety of topics will be covered, such as mate selection, power relationships and roles in the family, parent-child interaction, marital satisfaction, divorce, and others.

SOC 337 World Societies and World Systems 3c-0l-3sh
Prerequisite: One of the following: ANTH 110, ECON 101 or 121, GEOG 230, HIST 202, PLSC 101 or 282, SOC 151
A detailed analysis of the evolution of human societies, with special emphasis on the modern world system of societies that began to emerge in the sixteenth century and that has since expanded to include the entire globe. Topics include societies during the preindustrial era; the emergence of modern capitalism in the sixteenth century; relations between developed and less-developed societies in the modern world; the ascent and decline of nation-states in the modern world; the current plight of the Third World; the rise and demise of socialism in the twentieth century; and various scenarios for the human future.

SOC 340 Sociology of Industry 3c-0l-3sh
Prerequisite: SOC 151
An examination of industrial organizations and their environments. Production systems analyzed in terms of different forms of organization, e.g., bureaucratic, power-equilibrium, and worker-participation. Special attention paid to who defines production, how such definitions are legitimized, and how constraints are placed on such definitions by union and other political organizations.

SOC 341 Sociology of Education 3c-0l-3sh
Prerequisite: SOC 151
Examines the place of education in society. Special attention to the development of education in America and its relation to political and economic phenomena. Some attention given to education in other industrial and agrarian societies.

SOC 342 Social and Cultural Aspects of Health and Medicine 3c-0l-3sh
Prerequisite: 6sh in Sociology or Anthropology
A review of the fields of medical sociology and anthropology. Focuses on such topics as health and illness in cross-cultural context, aging, social and psychological aspects of pain, and social organization of health facilities and services. Definitions of limits of "life" and "death" in context of holistic health.

SOC 345 Interpersonal Dynamics 3c-0l-3sh
Prerequisite: SOC 151
A study of the interaction between and among individuals and groups in various social settings. The emphasis will be on self-understanding, small groups, socialization, social influence and compliance, person perception, collective behavior, and mass communication.

SOC 348 Sociology of Work 3c-0l-3sh
Prerequisite: SOC 151
Focuses upon the sociological examination of the various forms of labor, employment, and unemployment present in industrial societies. Examines the nature of work and unemployment in the modern era and how these forms are being transformed in the present period.

SOC 352 Sociology of Religion 3c-0l-3sh
Prerequisite: SOC 151
Nature, role, and function of religious phenomena in human societies will be explored with special attention to certain critical issues as they relate to religion and politics and religion and economics. Some fundamental modes of religious life including ritual forms and mythic expressions will be examined. Other themes such as revitalization movements and processes of secularization in modern societies will be included.

SOC 357 Sociology of Aging 3c-0l-3sh
Prerequisite: SOC 151
An introduction to various problems faced in the process of growing older. Attitudes of society toward elderly and social and cultural impact of an aging U.S. population examined.

SOC 361 Social Stratification 3c-0l-3sh
Prerequisite: SOC 151
Examines leading perspectives in the major sociological subfield of social stratification. Attention drawn to different ways of ranking people in human societies, issues concerning the distribution of income and wealth, the role of political power in determining who gets what, and the causes and consequences of social inequality for specific groups.

SOC 362 Racial and Ethnic Minorities 3c-0l-3sh
Prerequisite: SOC 151
Examines from a historical and comparative perspective the experiences of minority groups, with special emphasis on economic and political domination, stereotyping, prejudice, and discrimination. Techniques of majority group domination and the responses of minority groups are discussed. Various reasons for the different rates and patterns of assimilation are explored.

SOC 363 Sociology of Gender 3c-0l-3sh
Prerequisite: SOC 151
Explores current perspectives on the situations faced by women and men, primarily in the United States. Examines issues such as the impact of sex and gender on socialization, the construction of knowledge, intimate relationships, paid work, family relationships, health, and issues of change.

SOC 380 Social Research Methods 3c-0l-3sh
Prerequisites: 9sh in SOC and junior standing
Examines diverse research designs used in the social sciences, i.e., survey, field study, experiment, documentary, and existing statistical data. Focuses both on logic and practice of social research. Students choose a number of mini-projects or a major research project.

SOC 421 Sociology of Mass Media 3c-0l-3sh
Prerequisite: SOC 151
Examines the development of mass media as dominant cultural forms within advanced industrial societies in the twentieth century. Emphasizes critical understanding of the sociohistorical development, the underlying assumptions, and the social implications of the advance of mass media.

SOC 427 Spouse Abuse 3c-0l-3sh
Prerequisite: SOC 151
Considers the range of theoretical explanations for the pervasive violence between husband and wife. Particularly examines the research on wife battering and the implications of this research for programs and policies assisting both the victim and the abuser.

SOC 428 Child Abuse 3c-0l-3sh
Prerequisite: SOC 151
Examines the prevalence, causes, and social implications of physical, sexual, emotional, and neglect forms of child abuse in society. Child abuse will be studied from the individual, family, and societal level perspectives. Potential intervention strategies will also be considered.

SOC 448 Social Policy 3c-0l-3sh
Prerequisite: SOC 151
Focuses on the formation of social welfare programs in the U.S., current social policy issues, and debates between conservative, liberal, and social democratic policy analysts. Special attention drawn to various social problems and a range of social policies designed to ameliorate the economic disadvantages of single individuals, single parents, and two-parent families. Also devoted to understanding the relationship between social policy, research, and implementation.

SOC 452 Disability and Society 3c-0l-3sh
Prerequisite: SOC 151
Analyzes disability from a sociological perspective. Includes consideration of historical and current views of disability and a review of related concepts from the fields of medical sociology and the sociology of deviance. Also includes an analysis of the effects of disabilities on individuals and families through the life course and a consideration of related ethical, economic, political, and social policy issues. The emphasis is on disability as a social construction.

SOC 456 Field Research Methods 3c-0l-3sh
Prerequisite: SOC 380 or permission
An examination of methods and practice of sociology and anthropology in the areas of qualitative and field methods. Concentrates upon the development of field notes, interviewing techniques, participant observation, etc. Qualitative methods of sampling and analysis will include theoretical sampling and analytic induction. Brief background research into community, organizational, and group structure will also be emphasized.

SOC 457 Computer Use in Sociology 3c-0l-3sh
Prerequisite: Permission of the instructor
Introduces students to use of microcomputers in social science research and practice. Uses a variety of software for clinical sociological applications as well as quantitative analysis of social scientific data. These include client information systems, field notes and downloading such notes, exchanging information between agencies, and statistical analyses for program evaluation and forecasting.

SOC 458 Political Sociology 3c-0l-3sh
Prerequisite: SOC 151
An examination of the social context of power and politics, with special reference to such topics as who controls the state and state policy; the role of the state in stabilizing capitalism and protecting the power of the upper class; political activities of the middle and upper classes; and labor, civil rights, and welfare rights social movements in America. Especially considers the problems of conducting and implementing social policy research for social change. Cross-listed as PLSC 346.

SOC 480 Sociology Seminar var-1-3sh
Prerequisite: SOC 151
A seminar for advanced students devoted to an intensive analysis of specialized issues within the discipline.

SOC 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

SOC 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
An opportunity for students to engage in an in-depth analysis of some topic through consultation with a faculty member. A semester project ordinarily expected. Approval is based on academic appropriateness and availability of resources.

SOC 483 Readings in Sociology var-1-3sh
Prerequisite: SOC 151
Directed readings on special topics in sociology.

SOC 493 Internship in Sociology var-3-12sh
Prerequisite: Prerequisites vary by track. Permission of Internship Coordinator required.
Supervised experience in a public or private organization that extends and complements coursework at the university.

SOWK Social Work

Department of Sociology
College of Humanities and Social Sciences

SOWK 238 Introduction to Social Work 3c-0l-3sh
Prerequisite: ANTH 110 or SOC 151
An introduction to the dynamics of helping relationships.

SPAN Spanish

Department of Spanish and Classical Languages
College of Humanities and Social Sciences

SPAN 101 Elementary Spanish I 4c-0l-4sh
For beginning students. Primary emphasis is on aural/oral skills. Students will learn to converse and ask questions in simple present time and become acquainted with location of Hispanic populations and elements of their daily lives. Attendance is required.

SPAN 102 Elementary Spanish II 4c-0l-4sh
A continuation of SPAN 101. Students will learn to express past and future time. They will continue to learn about Hispanic countries and their cultures. Attendance is required.

SPAN 121 Spanish for Health Care Professionals I 3c-0l-3sh
For beginning students in nursing and other health-related programs. Primary emphasis is on aural/oral skills. Students will learn to converse and ask questions related to health care settings in simple present time and near future. They will also become acquainted with Hispanic populations and elements of their daily lives. Class and language lab attendance are required. A student may receive credit for only one course from SPAN 101, 111, 121, or 131.

SPAN 122 Spanish for Health Care Professionals II 3c-0l-3sh
Prerequisite: SPAN 121 or equivalent
A continuation of SPAN 121 for students in nursing and other health-related programs. Primary emphasis is on aural/oral skills. Students will learn to express past and future time in health care settings. They will read articles about medical issues and short stories which concern health care themes in Hispanic cultures. Class and language lab attendance are required. A student may receive credit for only one course from SPAN 102, 122, 132, or 211

SPAN 131 Spanish for the Hospitality Industry I 3c-0l-3sh
Similar to SPAN 101 but with a special emphasis on the vocabulary and structures used in the hospitality industry: hotel and restaurant management, tourism, and marketing. Class and language lab attendance is required. A student may receive credit for only one course from SPAN 101, 111, 121, or 131.

SPAN 132 Spanish for the Hospitality Industry II 3c-0l-3sh
Prerequisite: SPAN 131 or equivalent
Similar to SPAN 102 but with a special emphasis on the vocabulary and structures used in the hospitality industry: hotel and restaurant management, tourism, and marketing. Class and language lab attendance is required. A student may receive credit for only one course from SPAN 102, 122, 132, or 211.

SPAN 201 Intermediate Spanish 4c-0l-4sh
Prerequisite: SPAN 102 or equivalent
A continuation of previous work on listening, speaking, reading, and writing skills. Students will learn to function in everyday situations, expressing opinions and doubts, and narrating and describing in present, past, and future time. Exposure to cultural concepts through literary readings. Liberal Studies credit is given.

SPAN 221 Intermediate Spanish Conversation 3c-0l-3sh
Prerequisite: SPAN 201 or equivalent
Intensive work on oral communication skills with emphasis on vocabulary building, pronunciation, and discourse strategies. Required for all majors and minors.

SPAN 222 Intermediate Spanish Conversation-Business 3c-0l-3sh
Prerequisite: SPAN 201 or equivalent
Same as SPAN 221 but with a special emphasis on the vocabulary and structures used in the business world. Substitutes for SPAN 221.

SPAN 223 Intermediate Spanish Conversation-Criminology 3c-0l-3sh
Prerequisite: SPAN 201 or equivalent
Same as SPAN 221 but with a special emphasis on the vocabulary and structures used in law enforcement and criminal justice. Substitutes for SPAN 221.

SPAN 230 Intermediate Spanish Composition 3c-0l-3sh
Prerequisite: SPAN 221 or concurrent registration
Intensive practice in written expression in Spanish. Both communicative and structural skills are stressed. Taught in Spanish. Required for all majors and minors. Approved to meet the Liberal Studies requirement for a writing-intensive course for majors.

SPAN 244 Modern Mexico 3c-0l-3sh
Prerequisites: SPAN 201 or equivalent and participation in the Mexico Summer Study Abroad Program
Taught in Mexico as part of the study abroad program, introduces students to the contemporary culture of the largest Spanish-speaking country in the world. A historical perspective is provided within which to understand current phenomena. Textbook readings are supplemented with readings from literary works and current periodicals. Students will gain firsthand experience both through field trips and by living with a Mexican family. Taught in Spanish.

SPAN 260 Intrnduction to Hispanic Literature 3c-0l-3sh
Prerequisite: SPAN 230 or equivalent
A prerequisite for any 300- or 400-level course in Hispanic literatures. Designed to provide students with the tools necessary for developing literary competence, the course combines a study of literary genres and analysis with an introduction to the literatures of Spain and Spanish America. Taught in Spanish. Required for all majors and minors.

SPAN 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

SPAN 290 Spanish for Elementary Teaching 3c-0l-3sh
Prerequisite: SPAN 201 or equivalent oral proficiency rating. For students enrolled in the FLISET Program
Designed for Elementary Education/Early Childhood majors who are completing the FLISET Program. The purpose is to increase the students' proficiency in Spanish and to prepare them for an internship in an elementary school abroad. An emphasis is placed on vocabulary acquisition and on strengthening of listening and speaking abilities in Spanish. Through in-class interaction and practice in the language laboratory, students improve their linguistic skills, learn the language necessary for dealing with elementary-age children, and acquire basic vocabulary for teaching the content areas of the elementary school curriculum.

SPAN 321 Advanced Spanish Conversation 3c-0l-3sh
Prerequisite: SPAN 230 or equivalent
Extensive practice in oral communication skills. An emphasis is placed on developing fluency in speaking over a wide range of topic areas. Required for all majors and minors.

SPAN 340 Hispanic Civilization Through the Nineteenth Century 3c-0l-3sh
Prerequisite: SPAN 230 or equivalent
An introduction to the significant aspects of the culture of both Spain and Spanish America. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations of Hispanic culture as these have revealed themselves through the nineteenth century. Taught in Spanish. Required for all majors and minors.

SPAN 342 Twentieth-Century Spanish Civilization and Culture 3c-0l-3sh
Prerequisite: SPAN 230 or equivalent
An analysis of the major cultural trends in twentieth-century Spain as they relate to its current problems, aspirations, and values. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations. Taught in Spanish; offered alternate years. (May not duplicate credit for SPAN 382 taken in Valladolid)

SPAN 344 Twentieth-Century Spanish-American Civilization and Culture 3c-0l-3sh
Prerequisite: SPAN 230 or equivalent
An analysis of the major cultural trends in twentieth-century Spanish America as they relate to its position in the world. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations, including indigenous cultural influences. Taught in Spanish; offered alternate years.

SPAN 353 Spanish Phonetics and Phonemics 3c-0l-3sh
An introduction to the phonological study of the sounds and training in pronunciation. The student will learn the theoretical basis for understanding the Spanish sound system and will perfect pronunciation through classroom practice and tapings. Taught in Spanish. Required for Spanish Education majors; highly suggested for Spanish majors.

SPAN 354 Commercial Spanish 3c-0l-3sh
Prerequisite: SPAN 230 or equivalent
Designed especially for majors in Spanish for International Trade, this course has three focuses: it teaches students how to do business communications in Spanish; it teaches the vocabulary necessary for dealing with all aspects of trade and commerce; and it introduces students to the special concerns and practices of business in the Spanish-speaking world. Taught in Spanish.

SPAN 362 Survey of Peninsular Literature 3c-0l-3sh
Prerequisite: SPAN 260 or permission
Designed to introduce students to a careful and critical reading of literary texts from Spain read either in their entirety or in select passages. Taught in Spanish; offered alternate years.

SPAN 364 Survey of Spanish-American Literature 3c-0l-3sh
Prerequisite: SPAN 260 or permission
Designed to introduce students to a careful and critical reading of Spanish-American literary texts read either in their entirety or in select passages. Taught in Spanish; offered alternate years.

SPAN 382-389 Pennsylvania-Valladolid Program 18sh
Prerequisites: SPAN 230 and 260 or permission
Contact chairperson, Department of Spanish and Classical Languages. Courses taken in Valladolid include the SPAN 382-389 and SPAN 482 (3sh). Descriptions below.

SPAN 382 Contemporary Spain 3sh
Prerequisites: SPAN 230 and 260 or permission
Gives the student a general view of Spain today in the areas of society, economy, and political institutions. (See SPAN 342)

SPAN 383 Geography and History of Spain 3sh
Prerequisites: SPAN 230 and 260 or permission
Students will be introduced to a panorama of Spanish physical, social, and economic geography, including the recent autonomic division of the country and the communication among the autonomies. Students will also review the history of Spain from the fifteenth century to the present with special emphasis on today's Spanish institutions.

SPAN 384 History of Spanish Art 3sh
Prerequisites: SPAN 230 and 260 or permission
Students will be exposed to the richness of art in the Iberian Peninsula and in particular in the area of Madrid and Castilla-Leon. They will study the evolution of Spanish art in history, giving more emphasis to contemporary tendencies.

SPAN 385 Survey of Spanish Literature 3sh
Prerequisites: SPAN 230 and 260 or permission
Students will be introduced to a general study of Spanish literature from its origin to the present time and will learn to appreciate and analyze the different literary genres. An emphasis will be placed on twentieth-century literature.

SPAN 389 Theory and Practice of Spanish Language 3sh
Prerequisites: SPAN 230 and 260 or permission
Students will be introduced to Spanish syntax, morphology, and the Spanish language lexicon. They will be introduced to familiar and formal conversation and to idiomatic expressions used in everyday situations.

SPAN 390 Teaching of Elementary Content Through the Spanish Language 3c-0l-3sh
Prerequisites: Passage of a language proficiency examination and permission of the instructor
The student will study current theories of language acquisition processes in children and will develop foreign language instructional objectives and activities which integrate language and cultural learning with the content areas of the elementary school curriculum. Through hands-on practice, the student will develop techniques for teaching functional language, planning lessons, testing language skills, setting curricular objectives, and selecting/designing materials appropriate to the needs and interests of elementary school foreign language learners.

SPAN 400 History of the Spanish Language 3c-0l-3sh
Prerequisite: SPAN 230 or equivalent
Traces phonological, morphological, lexical, and syntactical evolution of Castilian dialect from its origins in vulgar Latin through its development, perfection, and ultimate recognition as the official language of Spain and Spanish America. Places Castilian linguistically with relation to other Romance languages and considers features peculiar to Spanish of Latin America. Taught in Spanish.

SPAN 402 Translation and Interpretation 3c-0l-3sh
Prerequisites: SPAN 230 and 321
Fundamental translation skills for use in business and industry as well as in academic and popular fields.

SPAN 403 Applied Linguistics 3c-0l-3sh
Prerequisite: SPAN 230
An introduction to Spanish linguistics for students who have had no previous experience in linguistics. Students will study the application of areas such as phonology, morphology, syntax, and semantics and will explore issues in psycholinguistics and sociolinguistics. Taught in Spanish.

SPAN 404 Advanced Spanish Grammar 3c-0l-3sh
Prerequisites: SPAN 221 or equivalent and SPAN 230 and senior standing or departmental permission
An in-depth study of Spanish syntax and morphology. Taught in Spanish. Required for all majors.

SPAN 410 Medieval Literature 3c-0l-3sh
Prerequisite: SPAN 260 or permission
Reading and discussion of various medieval genres: brief prose narrative, epic, lyric, and didactic poetry, prose, and medieval drama. Taught in Spanish; offered in four-year rotation.

SPAN 411 Golden Age Literature 3c-0l-3sh
Prerequisite: SPAN 260 or permission
An analysis of themes, motifs, and stylistic devices of Spanish poetry, novel, and theater of the Renaissance and Baroque. Taught in Spanish; offered in four-year rotation.

SPAN 412 The Spanish Novel of the Nineteenth and Twentieth Centuries 3c-0l-3sh
Prerequisite: SPAN 260 or permission
An analysis of selected novels from three major periods: the nineteenth century, the Generation of 1898, and the post Civil War. Taught in Spanish; offered in four-year rotation.

SPAN 413 Spanish Poetry of the Nineteenth and Twentieth Centuries 3c-0l-3sh
Prerequisite: SPAN 260 or permission
The study and analysis of lyric poetry in Spain from nineteenth-century poetry through modernism and its evolution to the present. Taught in Spanish; offered in four-year rotation.

SPAN 420 Modern Hispanic Theater 3c-0l-3sh
Prerequisite: SPAN 260 or permission
The study and analysis of modern dramatic works from Spain and Spanish America. Particular emphasis will be given to the representational aspect of the works. Taught in Spanish; offered in four-year rotation.

SPAN 421 Modern Hispanic Short Story 3c-0l-3sh
Prerequisite: SPAN 260 or permission
The critical analysis of short stories by Spanish and Spanish-American authors. Taught in Spanish; offered in four-year rotation.

SPAN 430 Twentieth-Century Spanish-American Prose 3c-0l-3sh
Prerequisite: SPAN 260 or permission
Traces literary expressions from the turn of the century to the present in the major prose expressions of the essay, the short story, and the novel. Taught in Spanish; offered in four-year rotation.

SPAN 431 Spanish-American Poetry 3c-0l-3sh
Prerequisite: SPAN 260 or permission
A study of Spanish American poetry from its early manifestations through modernism, post-modernism, and avant-garde. Taught in Spanish; offered in four-year rotation.

SPAN 451 Conversation Forum 2c-0l-2sh
Prerequisite: SPAN 321 or equivalent
Extensive work on the development of speaking skills at the "Advanced Low" level of oral proficiency, as defined in the Speaking Guidelines developed by the American Council on the Teaching of Forcign Languages. Focuses on paragraph-length discourse and narration and description in present, past, and future time frames within a variety of topics and contexts.

SPAN 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

SPAN 482 Independent Study var-1-6sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
An opportunity to engage in an in-depth analysis of some topic dealing with the Spanish language and culture through consultation with a faculty member. Approval is based on academic appropriateness and availability of resources.

SPAN 493 Internship var-3-12sh
Prerequisite: One semester of study in a Spanish-speaking country
A supervised field experience in any Spanish-speaking area of the world with approved public agencies and institutions or private firms, no longer than one semester and no less than one month. Positions will be matched as closely as possible with the intern's personal interests and professional goals. For more information contact the Spanish and Classical Languages Department. Maximum of 6sh can be applied toward a major.

SPLP Speech Pathology and Audiology

Department of Special Education and Clinical Services
College of Education and Educational Technology

SPLP 111 Introduction to Communication Disorders 3c-0l-3sh
An introduction to study of physiological, acoustical, and scientific processes involved in production and reception of speech. The genetic development of speech sounds and factors that hinder or facilitate speech and language acquisition.

SPLP 122 Clinical Phonology 3c-0l-3sh
A detailed study of the classification of American-English phonemes using the physical and acoustical perspectives. Development of proficiency in use of International Phonetic Alphabet for allophonic transcriptions of normal and disordered speech.

SPLP 222 Introduction to Audiology 3c-0l-3sh
The study of auditory function, anatomy of auditory mechanism, psychophysics of sound, types and causes of hearing loss, measurement of hearing, and educational considerations for hearing-handicapped child.

SPLP 242 Speech Science I 3c-0l-3sh
The study of the communication process with emphasis on physical characteristics of sound production, transmission and perception of the sound, and the evolvement and use of symbols for meaningful communication. The scientific principles of normal oral communication are stressed, and language learning is recognized as a basis for oral communication.

SPLP 251 Anatomy and Physiology of the Speech and Hearing Mechanism 3c-0l-3sh
Consideration of genetic development, structure, and function of the organs of speech and hearing. Anatomical systems involved in respiration, phonation, articulation, and hearing and relationships between systems in production and reception of speech.

SPLP 254 Classroom Management of Language Disorders 3c-0l-3sh
A study of aspects of speech, language, and hearing problems pertaining to classroom situation. Types of speech and hearing disorders, conducting speech and language improvement lessons, classroom aids for teaching the child with language, speech, and hearing impairment, and school and community resources for these children. (Required for majors in Education of the Exceptional and suggested for majors in Elementary Education)

SPLP 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

SPLP 311 Aural Rehabilitation 3c-0l-3sh
Prerequisites: SPLP 222, 2.5 GPA
Consideration of the effects of varied degrees of hearing loss sustained by individuals at different stages of development and study of total education and rehabilitative procedures for the hard-of-hearing child or adult.

SPLP 334 Language Development 3c-0l-3sh
Prerequisite: 2.5 GPA
The study of the development of an interpersonal communication system: language as a system of symbols for communication; the structure of the English language, including phonology, syntax, and semantics with emphasis on the generative evolvement of sentences. Highlighting the neurological, social, and psychological bases of language development.

SPLP 342 Speech Science II 3c-0l-3sh
Prerequisites: SPLP 242, 2.5 GPA
Physiologic, acoustic, and perceptual characteristics of speech with special emphasis on speech monitoring and controls. Major lab instrumentation and research techniques in current use are described and demonstrated. The status of present knowledge is summarized and discussed.

SPLP 406 Articulation and Language Disorders 3c-0l-3sh
Prerequisites: SPLP 111, 242, 251, 334, 2.5 GPA
An exploration of the processes related to developmental articulation and language disorders from birth through adolescence. Instruction in the principles underlying modification of these disorders. Preparation of management programs and observation in the Speech and Hearing Clinic required.

SPLP 408 Stuttering and Voice Disorders 3c-0l-3sh
Prerequisites: SPLP 111, 242, 251, 334, 2.5 GPA
An introduction to the developmental, psychogenic, and organic bases for stuttering and voice disorders. Instruction in principles underlying treatment of these disorders with emphasis on anatomical deviations and laryngeal dysfunction. Preparation of management plans and observation in Speech and Hearing Clinic required.

SPLP 412 Organization and Administration of Speech and Hearing Program 3c-0l-3sh
Prerequisites: SPLP 111, 2.5 GPA (meets requirement for Professional Education course)
Establishment and maintenance of speech and hearing programs within various administrative organizations, particularly in the public schools. The techniques of client identification, scheduling, recordkeeping, appropriate referral, material and equipment selection, teacher and parental counseling, and the development of coordinated professional and interdisciplinary procedures.

SPLP 420 Speech Clinic var-1-3sh
Prerequisites: EDUC 242, 342, GPA of 3.0 or better, all major courses, program director's permission
An experience in working with individuals or groups of persons who exhibit speech or hearing problems. Lesson planning, writing of reports, and case histories of a detailed nature.

SPLP 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

SPLP 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

THTR Theater

Department of Theater and Dance
College of Fine Arts

THTR 101 Introduction to Theater 3c-0l-3sh
An exploration of the theater arts, examining major periods of theater history, selected works of dramatic literature, and the primary theater arts of acting, directing, design, and technical theater. Class experience includes the analysis of at least two major works of drama, attending two live productions, and viewing of selected televised plays and musicals.

THTR 110 Script Analysis 3c-0l-3sh
Examines major as well as alternative systems by which dramatic texts may be analyzed, including classical plot constructinn, scene structure, tension and release, dramatic rhythms, and several contemporary and less conventional methods of dramatic orchestration.

THTR 116 Fundamentals of Theatrical Design 3c-0l-3sh
Introduces the fundamentals of scene, costume, lighting, and sound design for theater and dance. Focuses on creative processes used by designers to make choices. Topics include script analysis, director and designer communication, and the integration of the design elements into a unified production.

THTR 120 Stagecraft I 3c-0l-3sh
An exploration of the material, methods, and procedures utilized in creating a scenic environment. Through instruction and practical application, students learn the basis of scenic construction and develop competency with the basic materials and equipment used in a theatrical scene shop.

THTR 122 Costume Workshop 3c-0l-3sh
Instruction and practical experience in the process of building costumes for the stage. Activities include fitting, cutting, sewing, dyeing, and painting. There is also instruction in the maintenance of wardrobe, costume stock, materials, and properties.

THTR 130 Stage Voice 3c-0l-3sh
Prerequisite: Theater majors only or permission of instructor
Instruction in basic development of the vocal instrument of the actor in stage performance. An emphasis is placed upon the resonance, quality, pitch, and projection of the voice while improving the student's ability to articulate.

THTR 131 Stage Movement 3c-0l-3sh
Instruction in basic stage movement and the physicalization of character. Includes work in character development through variety in movement, introductory work in juggling, stage combat, and mime, and the assessment, awareness, and correction of individual movement problems.

THTR 201 Theater History I 3c-0l-3sh
A comprehensive survey of the history, trends, and developments of theater and drama from their beginnings through the English Renaissance.

THTR 202 Theater History II 3c-0l-3sh
A comprehensive survey of the history, trends, and developments of theater and drama from the English Restoration to the present.

THTR 220 Stagecraft II 3c-0l-3sh
Prerequisite: THTR 120 or permission
An advanced exploration of materials, methods, and procedures involved in creating a scenic environment. Students also receive intensive practical experience in shop planning and supervision to include problem-solving techniques.

THTR 221 Basic Stage Lighting 3c-0l-3sh
Prerequisite: THTR 120
An introduction to lighting instruments, color media, control boards, physical laws of electricity and optics, graphics, and conventional techniques used in lighting theatrical productions.

THTR 223 Makeup for the Stage 3c-0l-3sh
Deals with practical application of straight and character makeup and may include instruction in creating beards, wigs, prosthetics, and masks.

THTR 240 Acting I 3c-0l-3sh
The study of the primary elements of the Stanislavski system of character development. Includes text analysis and the development of physical action through a character's subtext, as well as motivational and improvisational techniques.

THTR 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

THTR 301 Tragic Mask 3c-0l-3sh
A historical survey of theatrical conventions, traditions, and production practices specifically associated with tragedy and its ensuing forms: drama and melodrama. Focuses on landmark dramatic texts, examining the changing faces of tragic masks and their implications for theatrical practice from ancient Greece to the twentieth century.

THTR 302 Comic Mask 3c-0l-3sh
A historical survey of theatrical conventions, traditions, and production practices specifically associated with comedy and its related forms: farce, burlesque, etc. Focuses on landmark dramatic texts, examining the changing faces of comic masks, their conventions, and their implications for theatrical practice from ancient Greece to the twentieth century.

THTR 310 Theater Criticism 3c-0l-3sh
A study of the theory of criticism and of the discrete functions of critic and reviewer. Students see live performances and practice writing both reviews and criticism.

THTR 320 Scene Design 3c-0l-3sh
Prerequisite: THTR 120
An introduction to the principles of scenic composition, analysis, concept development, and graphic communication methods used by the scenographer.

THTR 321 Stage Lighting Design 3c-0l-3sh
Prerequisite: THTR 221
Covers the design and execution of stage lighting with emphasis on script analysis, the collaborative role of the lighting designer, lighting theory, and modern stage lighting practices. Practical applications include the conceptualization and designing of production lighting for Proscenium, Thrust, and Arena stages through class exercises.

THTR 322 Costume Design 3c-0l-3sh
Covers design and execution of stage costumes with emphasis on showing how mood and illusion can be created through the proper selection of style, color, and texture, supplemented by an overview of stage costuming.

THTR 323 Sound Design 3c-0l-3sh
Covers the basic principles and theories of designing sound for the theater. Through demonstration and practical application, covers the following principal areas: basic electronics, recording techniques and equipment, musical and effects integration, theater acoustics, designing sound, and sound reinforcement.

THTR 340 Acting II 3c-0l-3sh
Prerequisite: THTR 240 or permission of instructor
The study of the evolving Stanislavsky system and its American reinterpretations as applied to realism and other dramatic genres and styles. The emphasis will be on scoring of text, exploring the relationships between psychological states and physical action.

THTR 341 Acting Styles 3c-0l-3sh
Prerequisites: THTR 130/131, 240 or permission of instructor
A study and practice of advanced acting skills, with special emphasis on style and period. Possible areas of focus: Greek classical, Commedia Dell'Arte (farce), French Neoclassical, Restoration Comedy, Melodrama, High Comedy (Wilde/Coward), or Theater of the Absurd.

THTR 342 Acting Shakespeare 3c-0l-3sh
Prerequisites: THTR 240, 340 or permission of instructor
An advanced acting studio which will prepare students to perform in Shakespeare's plays. Provides a background overview of the Elizabethan period in addition to various methods towards approaching the movement, language, and verse forms from an actor's point of view.

THTR 345 Touring Young People's Theater 3c-0l-3sh
Introduces the fundamentals of young people's theater for audiences aged five through fifteen years. Class members will select appropriate children's literature, develop a script through improvisation, and rehearse and tour their production to the surrounding schools.

THTR 347 Playwriting 3c-0l-3sh
Prerequisite: THTR 110 or permission of professor
A practical exploration of the craft and process of playwriting. Focuses primarily on the practical, "hands-on" experiences approximating the "developmental process" currently in use in the American theater. The student will be guided from the initial concept through synopsis, outlines, working drafts, and completion of an original one-act play and a "staged reading" of this project.

THTR 350 Directing 3c-0l-3sh
Prerequisites: THTR 110, 240, or permission of instructor
An introduction to basic directing skills: casting, floor plans, blocking, rehearsal procedures, and the applications of scene and character analysis. Students will prepare short scenes for class presentation.

THTR 481 Special Topics var-1-6sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

THTR 482 Independent Study var-1-6sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Independent study in theater may be either purely academic or may be a practical production project, supported by a written document giving evidence of significant scholarly investigation or original, creative effort. May be repeated to a maximum of 6sh. Approval is based on academic appropriateness and availability of resources.

THTR 483 Acting Studio 3c-2l-3sh
Prerequisites: Minimum of THTR 240, by permission; individual foci have additional prerequisites
An advanced studio course offering scene practice with faculty direction, coaching, and criticism. Specific focus of scene work varies from semester to semester, including improvisation techniques, stage dialects, audition techniques, and acting for the camera as alternating semester options. May be repeated with a different focus each time.

THTR 484 Directing Studio 3c-2l-3sh
Prerequisites: THTR 350 or permission of instructor
An opportunity for students to direct scene work, one-act plays, or larger projects, according to individual levels of experience, preparation, and readiness. Practical application of principles of directing to specific problems in directing. Student projects performed in public, open-class recitals. May be repeated.

THTR 486 Practicum in Production var-3-4sh
Prerequisite: Permission of instructor
An opportunity with academic credit for students to make significant contributions to campus productions augmenting theater coursework in the areas of assistant directing or directing, stage management, technical direction, sound design, lighting, scene design, properties and set decoration, scene building and painting, costuming, dance, and make-up design. May be repeated.

THTR 489 Technical Theater Problems 3c-0l-3sh
Prerequisite: Permission of instructor
Open to all students desiring instruction in a variety of technical theater areas not presently covered in other courses. Topics to include sound design, stage management, set props, media make-up, technical drawing/mixed media, and scene painting. May be repeated.

THTR 493 Internship var-3-12sh
Prerequisite: Permission of instructor
Opportunities for students to gain experience with professional performance organizations in areas related to theater and dance.

UVWD Universitywide Courses

Academic Affairs Division

UVWD 480 T.H.I.S. Seminar 3c-0l-3sh
An academic seminar taken at the State System of Higher Education University Center in Harrisburg in conjunction with the T.H.I.S. internship. Consists of public policy information, decision making, and budgeting and addresses question-and-answer sessions with leading state government policymakers. See description under Academic Affairs areas. Restricted to the T.H.I.S. internship participant. See UVWD 493.

UVWD 493 T.H.I.S. Internship var-12sh
A practical experience at the policymaking level of the state government that also requires a research project. Student must have a 3.0 GPA and submit a sample of writing skills with the application to the Experiential Education Office. Open to any IUP major. See description under Academic Affairs areas. Concurrent seminar course required. See UVWD 480.

VOED Vocational Education

Center for Vocational-Technical Personnel Preparation
School of Continuing Education

VOED 010 Industrial Electrical Technology var-1-18sh
Prerequisite: Center/department permission
The emphasis will be on comprehensive industrial electrical technology through training in specialty concentrations applied to design, development, and testing of electrical circuits, devices, and systems for generating electricity and the distribution and utilization of electrical power. Carries institutional credit only.

VOED 100 Preparation of the Vocational Professional I var-1-15sh
Personalized, self-paced vocational teacher preparation. The vocational student/intern develops, demonstrates, and documents competence in selected pedagogical competencies. Individualized instruction is supplemented with monthly seminars. Self-evaluation is encouraged in the program, utilizing videotaping and the feedback from a team of professional teacher educators.

VOED 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

VOED 395 Vocational Education Writing Experience var-0sh
Writing assignments such as abstracts, logs of activities, philosophy papers, training plans, presentation plans, lesson plans, etc., will be completed in conjunction with selected instructional modules from VOED 100 and 400 courses.

VOED 400 Preparation of the Vocational Professional II var-1-15sh
Prerequisite: Successful completion of VOED 100
Personalized, self-paced vocational teacher preparation. The vocational student/intern develops, demonstrates, and documents competence in selected teaching skills in the areas of program planning, program development, program evaluation, and managing and evaluating instruction in a vocational school setting. Self-evaluation is encouraged in the program, utilizing videotaping and the feedback from a team of professional teacher educators.

VOED 401 Special Topics in Vocational Technical Preparation var-1-12sh
Prerequisite: Center permission
Provides opportunities for vocational students/interns to develop additional technical skills in areas related to their occupational competence under professional supervision. Topics are determined through individual counseling, through priority needs identified by advisory committees, and through evaluation of technical competence by center teaching staff.

VOED 402 Special Topics in Vocational Pedagogical Preparation var-1-15sh
Prerequisite: Center permission
Provides opportunities for vocational students/interns to develop additional teaching skills under professional supervision. Topics are determined through identification of priority areas in vocational education using national and state surveys and students' individual needs.

VOED 450 Technical Preparation of the Vocational Professional 24sh
Competency assessment of occupational experience through national standardized written and performance examinations.

VOED 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

VOED 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

WMST Women's Studies

Women's Studies Program
Academic Affairs Division

WMST 200 Introduction to Women's Studies 3c-0l-3sh
Focuses on women as they are and as they have been—as represented by the work of writers and as presented in the theory and research of various disciplines. Historical and contemporary images of women are examined in terms of their impact on our lives. The relationships of women to social institutions such as education, religion, and health care are explored. Alternative theories explaining the roles and status of women are compared. Attempts to help us understand the choices and experiences women face in their everyday personal, work, and public lives.

WMST 281 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

WMST 481 Special Topics var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

WMST 482 Independent Study var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

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Anthropology: Anja C. Olin-Fahle

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Communications Media: Merle G. Klinginsmith, Donald M. MacIsaac, J. Robert Murray, David L. Young

Computer Science: Howard E. Tompkins

Consumer Services: Willa Ruth Cramer, Betty L. Wood

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Economics: Donald A. Walker

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Finance and Management Information Systems: Leslie S. Spencer

Food and Nutrition: Margaret L. Minnick

Foundations of Education: Don-Chean Chu

French: Fernand Fisel, Robert L. Whitmer

Geography and Regional Planning: Susan E. Forbes, Thomas G. Gault, Vincent P. Miller, Leonard P. Tepper, Charles E. Weber

Geoscience: Frederick R. Park

Health and Physical Education: Barbara A. Aierstock, Thomas L. Beck, Lois A. Clark, S. Jane Dakak, Carl D. Davis, Alice D. Dickey, Mary Louise Eltz, Charles A. Godlasky, Royden P. Grove, Richard J. Hornfeck, Victor Liscinsky, William A. Neal, Edward L. Sloniger, Louis R. Sutton, Lawrence R. Tucker

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Home Economics Education: Eleanor M. Gallati, Helen B. Hovis, Alma L. Kazmer

Hotel, Restaurant, and Institutional Management: Ronald E. Simkins, Allen M. Woods

Human Development and Environmental Studies: Donna L. Streifthau

Industrial and Labor Relations: Conrad J. Gates, Martin J. Morand

Journalism: James M. DeGeorge, J. David Truby

Learning Center: Kathryn A. Stratton

Library/Media Resources: Richard Chamberlin, William E. LaFranchi (Director), Martha S. Scheeren, Marie E. Snead, Edward G. Wolf

Management and Marketing: Francis G. McGovern, Charles B. Stevenson

Management Information Systems: Kenneth L. Shiloh

Mathematics: Joseph S. Angelo, Ida Z. Arms, Donald D. Duncan, Raymond D. Gibson, Marlin E. Hartman, John P. Hoyt, Doyle R. McBride, Ronald L. McBride, Wallace F. Morrell, JoAnne Mueller, Carl P. Oakes, William L. Rettig, Edwin M. R. Smith, William R. Smith, Merle E. Stilwell, Halley O. Willison, Jr., Melvin R. Woodard

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Nursing and Allied Health Professions: Jean L. Blair, Helen M. Kresak, Marian A. Murray, Maxine K. Smatlak, Joann E. Thistlethwaite

Philosophy and Religious Studies: Benjamin C. Chan, Robert M. Hermann, R. Thomas Schaub

Physics: Richard E. Berry, Gary L. Buckwalter, John N. Fox, George M. Matous, Patrick J. McNamara, David M. Riban, Paul M. Waddell

Political Science: Edward Chaszar, Robert Morris, Dorothy A. Palmer, Edward E. Platt, Bert A. Smith

Professional Laboratory Experiences: Lois C. Blair

Professional Studies in Education/Elementary Education: Alberta R. Dorsey, Ralph M. Glott, P.D. Lott, Donald McFeely, Edward R. Mott, James B. Reilly, Joseph S. Rizzo, Edwina B. Vold, Joann Walthour

Psychology: Richard D. Magee, Gary W. R. Patton, Alexander R. Rich, Carl W. Schneider

Safety Sciences: Richard L. Christensen, Robert E. McClay, Jr., Nicholas N. Pacalo

Sociology/Anthropology: Betty B. Lanham

Spanish and Classical Languages: Cruz M. Mendizabal

Special Education: Marie J. Bahn, William B. Bahn, Jerry B. Fiddler, Morton M. Morris, Esther M. Shane

Student Affairs in Higher Education: Ronald W. Thomas

Student Personnel: James W. Laughlin

Technology Support and Training: Joseph A. Bianco, Donald C. Mahan, Bernard A. Moreau, Ruth S. Morris, John A. Polesky, Sharon D. Steigmann, Dale W. Woomer

Theater and Dance: Donald G. Eisen, Patricia L. Lommock

University School: Lida T. Fleming, Dorothy I. Lingenfelter, Lillian G. Martin

The Faculty

A

Abdul-Jawad Abu El-Haija, Ph.D., The Pennsylvania State University
Assistant Professor, Physics
Robert J. Ackerman, Ph.D., Western Michigan University
University Professor and Professor, Sociology
Frederick A. Adkins, Ph.D., University of Iowa
Associate Professor, Mathematics
Ibrahim J. Affaneh, Ph.D., University of Utah
Associate Professor, Chairperson, Finance and Legal Studies
Ali-Asghar Aghbar, Ph.D., Georgetown University
Professor, English
Onwubiko Agozino, Ph.D., University of Calabar (Nigeria)
Associate Professor, Criminology
Francisco E. Alarcon, Ph.D., University of Iowa
Professor, Mathematics
Mohamed H. Albohali, Ph.D., Kansas State University
Associate Professor, Management Information Systems and Decision Sciences
Abbas J. Ali, Ph.D., West Virginia University
Professor, Management
Ronald D. Ali, M.F.A., Carnegie Mellon University
Associate Professor, Art
Sanwar Ali, Ph.D., Texas Christian University
Associate Professor, Computer Science
Robert E. Alman, M.S., West Virginia University
Instructor, Health and Physical Education
Lynne B. Alvine, Ed.D., Virginia Polytechnic Institute and State University
Professor, English
William D. Ames, L.L.M.(Taxation), University of San Diego
Associate Professor, Finance and Legal Studies
Caroline I. Anderson, D.A., Carnegie Mellon University
Associate Professor, Mathematics
Fred P. Anderson, M.B.A., University of Michigan
Assistant Professor, Management
Kim L. Anderson, Ph.D., University of Pittsburgh
Associate Professor, Accounting
Allan T. Andrew, Ph.D., Utah State University
Professor, Biology
Dolores J. Appl, Ph.D., University of Illinois
Assistant Professor, Special Education and Clinical Services
Yaw A. Asamoah, Ph.D., Washington University
Professor, Economics; Dean's Associate, College of Humanities and Social Sciences
Maali H. Ashamalla, Ph.D., City University of New York
Professor, Management
Neil J. Asting, Ph.D., University of Rhode Island
Professor, Chemistry
C. Thomas Ault, Ph.D., University of Michigan
Associate Professor, Theater and Dance
Dennis Ausel, Ed.D., Indiana University
Associate Professor, Communications Media
W. Timothy Austin, Ph.D., University of Georgia
Professor, Criminology
Amadu D. Aycho, Ph.D., University of Nebraska
Assistant Professor, Biology

B

Gawdat G. Bahgat, Ph.D., Florida State University
Associate Professor, Political Science
Gary L. Bailey, Ph.D., Indiana University
Associate Professor, Chairperson, History
Janice M. Baker, Ph.D., University of Pittsburgh
Assistant Professor, Special Education and Clinical Services
John C. Baker, M.A., Siena Heights College
Assistant Professor, Hotel, Restaurant, and Institutional Management
John D. Baker, Ph.D., Indiana University
Assistant Professor, Mathematics
Donald A. Balenovich, Ph.D., Carnegie Mellon University
Associate Professor, Mathematics
Francis L. Ballas, Ph.D., West Virginia University
Professor, Chemistry
Mia M. Barker, Ph.D., University of Tennessee
Professor, Food and Nutrition
William F. Barker, Ph.D., University of Pennsylvania
Professor, Educational and School Psychology
Sheila B. Barlow, Ph.D., University of Pittsburgh
Associate Professor, Nursing and Allied Health
Marna S. Barrett, Ph.D., Memphis State University
Associate Professor, Psychology
Kathy Barton, Ph.D., University of Pittsburgh
Assistant Professor, Spanish and Classical Languages
Madan M. Batra, Ph.D., University of Wisconsin
Professor, Marketing
Alan T. Baumler, Ph.D., University of Illinois
Assistant Professor, History
Madeline P. Bayles, Ph.D., University of Pittsburgh
Associate Professor, Health and Physical Education
Charlene P. Bebko, Ph.D., University of Pittsburgh
Professor, Marketing
Jacqueline A. Beck, M.N., University of Pittsburgh
Assistant Professor, Nursing and Allied Health
Robert B. Begg, Ph.D., University of Iowa
Professor, Geography and Regional Planning
Sherrill J. Begres, Ph.D., Wayne State University
Associate Professor, Philosophy and Religious Studies
Raymond W. Beisel, Ph.D., The Pennsylvania State University
Associate Professor, University School
Holley A. Belch, Ph.D., Bowling Green State University
Assistant Professor, Student Affairs in Higher Education
Margaret W. Bellak, M.N., University of Pittsburgh
Associate Professor, Nursing and Allied Health
Carole B. Bencich, Ed.D., University of Georgia
Professor, English
Joseph W. Bencloski, Ph.D., The Pennsylvania State University
Associate Professor, Geography and Regional Planning
Nancy E. Benham, Ph.D., University of Southern Mississippi
Assistant Professor, Special Education
John E. Benhart, Ph.D., University of Tennessee
Associate Professor, Geography and Regional Planning
Paul Ben-Zvi, M.F.A., University of Iowa
Associate Professor, Art
Gail I. Berlin, Ph.D., University of Pennsylvania
Professor, English
Pearl S. Berman, Ph.D., Bowling Green State University
Professor, Psychology
Charles H. Bertness, Ph.D., University of Illinois
Professor, Mathematics
Narayanaswamy Bharathan, Ph.D., University of Maine at Orono
Assistant Professor, Biology
George R. Bieger, Ph.D., Cornell University
Professor, Chairperson, Professional Studies in Education
Gary J. Bird, D.M., Indiana University
Professor, Music
Christine Black, Ph.D., The Pennsylvania State University
Associate Professor, Health and Physical Education
Laurel J. Black, Ph.D., Miami University
Assistant Professor, English
Barbara S. Blackledge, M.F.A., University of North Carolina at Greensboro
Professor, Chairperson, Theater and Dance
William A. Blacksmith, III, Ed.D., West Virginia University
Professor, Health and Physical Education
Elaine H. Blair, Ph.D., University of Pittsburgh
Professor, Health and Physical Education
Holly R. Boda, M.F.A., Texas Women's University
Associate Professor, Theater and Dance
Wayne Bodle, Ph.D., University of Pennsylvania
Assistant Professor, History
P. Parker Boerner, M.F.A., Maryland Institute College of Art
Associate Professor, Art
Robert J. Boldin, Ph.D., University of Pennsylvania
Professor, Finance and Legal Studies
Daniel N. Boone, Ph.D., Claremont Graduate School
Professor, Chairperson, Philosophy and Religious Studies
Michael J. Bosse, Ph.D., University of Connecticut
Associate Professor, Mathematics
Lynn A. Botelho, Ph.D., University of Cambridge
Assistant Professor, History
Albert E. Bouffard, Ph.D., Duquesne University
Professor, Philosophy and Religious Studies
Martha G. Bower, Ph.D., University of New Hampshire
Professor, English

Fredalene B. Bowers, Ph.D., University of Pittsburgh
Assistant Professor, Human Development and Environmental Studies
Malcolm E. Bowes, Ph.D., Ohio University
Associate Professor, Theater and Dance
Faye L. Bradwick, CPA, J.D., LL.M. (Tax), Syracuse University and Georgetown University
Associate Professor, Accounting
Maryanne Brandenburg, Ph.D., Ohio University
Professor, Technology Support and Training
William M. Brenneman, Ph.D., University of Southern Mississippi
Assistant Professor, Biology
Lloyd W. Briscoe, Ph.D., University of Pittsburgh
Associate Professor, Professional Studies in Education
Roger L. Briscoe, Ph.D., University of Michigan
Associate Professor, Educational and School Psychology
Peter G. Broad, Ph.D., Johns Hopkins University
Professor, Spanish and Classical Languages
Kenneth W. Brode, Ph.D., University of Pittsburgh
Professor, German
John Broughton III, Ed.D., Oklahoma State University
Professor, Mathematics
Andrew C. Browe, Ph.D., Virginia Commonwealth University, Medical College of Virginia
Professor, Biology; Coordinator, Natural Sciences Program
Karen L. Brown, M.L.S., North Carolina Central University
Assistant Professor, Libraries and Media Resources
Timothy P. Brown, A.B., St. Benedict's College
Instructor, Culinary Arts
Donald W. Buckwalter, Ph.D., University of Tennessee
Associate Professor, Geography and Regional Planning
Jennie K. Bullard, Ph.D., Duquesne University
Associate Professor, Industrial and Labor Relations
Gerald M. Buriok, Ed.D., The Pennsylvania State University
Professor, Chairperson, Mathematics
Daniel A. Burkett, Ph.D., Carnegie Mellon University
Associate Professor, Mathematics
Louise B. Burky, Ph.D., University of Pittsburgh
Associate Professor, Chairperson, Management Information Systems and Decision Sciences
Sandra L. Burwell, M.Ed., The Pennsylvania State University
Associate Professor, Art
Gary L. Buterbaugh, Ph.D., University of Pittsburgh
Associate Professor, Chairperson, Computer Science
William B. Butler, Ph.D., University of Wisconsin
Professor, Chairperson, Biology
James F. Byers, Ph.D., University of Wisconsin
Professor, Chairperson, Industrial and Labor Relations

C

James M. Cahalan, Ph.D., University of Cincinnati
Professor, English
Carolyn K. Camp, Ph.D., Indiana University of Pennsylvania
Assistant Professor, English
Carol L. Caraway, Ph.D., University of Oklahoma
Professor, Philosophy and Religious Studies
Patrick A. Carone, Ph.D., Duke University
Professor, International Student Advisor, International Services
Carmy G. Carranza, Ed.D., Grambling State University
Associate Professor, Director/Chairperson, Learning Center
José M. Carranza, Ph.D., University of Pittsburgh
Professor, Spanish and Classical Languages
A. Keith Carreiro, Ed.D., Harvard University
Assistant Professor, Professional Studies in Education
Wendy K. Carse, Ph.D., Tulane University
Associate Professor, English
Charles D. Cashdollar, Ph.D., University of Pennsylvania
University Professor and Professor, History
Vince Celtnicks, Ed.D., West Virginia University
Associate Professor, Health and Physical Education
Karen R. Cercone, Ph.D., University of Michigan
Professor, Geoscience
Mary Ann Cessna, Ed.D., The Pennsylvania State University
Professor, Food and Nutrition; Director, Teaching Excellence Center
Miriam S. Chaiken, Ph.D., University of California
Professor, Anthropology
David D. Chambers, Ph.D., University of Illinois
Associate Professor, Acting Chairperson, Political Science
C. Stuart Chandler, M.T.S., Harvard University
Assistant Professor, Philosophy and Religious Studies
Deanna B. K. Chang, Ph.D., University of Hawai'at Manoa
Assistant Professor, Sociology
Mukesh K. Chaudhry, D.B.A., Cleveland State University
Professor, Finance and Legal Studies
Stanley Chepaitis, D.M.A., University of Rochester-Eastman School of Music
Associate Professor, Music
Sung-Gay Chow, Ph.D., University of Alabama
Assistant Professor, English
Richard A. Ciganko, Ed.D., Illinois State University
Assistant Professor, Art
Frank J. Cignetti, M.Ed., Indiana University of Pennsylvania
Professor, Assistant to the Director/Head Football Coach, Intercollegiate Athletics
Garry J. Ciskowski, Ph.D., University of Oklahoma Health Science Center
Associate Professor, Biology
Gary E. Clark, M.S., Western Kentucky University
Assistant Professor, Health and Physical Education
Lawrence N. Claus, J.D., University of Pittsburgh
Associate Professor, Criminology
Vaughn H. Clay, Ed.D., University of Pittsburgh
Professor, Chairperson, Art
Bernadette Cole-Slaughter, Ph.D., Purdue University
Associate Professor, Professional Studies in Education
Susan M. Comfort, Ph.D., University of Texas
Associate Professor, English
Francis J. Condino, Ed.D., West Virginia University
Associate Professor, Director, Intercollegiate Athletics
W. Thomas Conelly, Ph.D., University of California-Santa Barbara
Associate Professor, Anthropology
Carol E. Connell, M.L.S., University of Pittsburgh
Assistant Professor, Libraries and Media Resources
Frank Corbett, Jr., Ed.D., Temple University
Associate Professor, Professional Studies in Education
Carmine J. Cortazzo, Jr., M.S., University of Illinois
Assistant Professor, Health and Physical Education
Channa J. Craig, Ph.D., University of Nebraska at Lincoln
Assistant Professor, English
Anne D. Creany, D.Ed., Indiana University of Pennsylvania
Associate Professor, Professional Studies in Education
John A. Cross, Ph.D., University of Pittsburgh
Professor, Computer Science
John W. Cross, M.A., University of Massachusetts
Associate Professor, Economics
Thomas E. Crumm, Ph.D., University of Massachusetts
Professor, Chemistry
Thomas P. Cunningham, M.S., Carnegie Institute of Technology
Associate Professor, Computer Science

D

Susan S. Dahlheimer, Ph.D., University of Pittsburgh
Associate Professor, Food and Nutrition
Victoria B. Damiani, Ed.D., College of William and Mary
Associate Professor, Educational and School Psychology
Claire J. Dandeneau, Ph.D., Purdue University
Assistant Professor, Chairperson, Counseling
Karen A. Dandurand, Ph.D., University of Massachusetts
Associate Professor, English
Rosalyn B. Darling, Ph.D., University of Connecticut
Associate Professor, Sociology
Gary J. Dean, Ph.D., The Ohio State University
Associate Professor, Adult and Community Education
James C. Dearing, M.M., University of Wisconsin
Assistant Professor, Music
Dagem Dejene, Ph.D., The Ohio State University
Assistant Professor, Political Science
Laura L. Delbrugge, Ph.D., The Pennsylvania State University
Assistant Professor, Spanish and Classical Languages
Hilary L. DeMane, O.S., Culinary Institute of America
Instructor, Culinary Arts
Portia Diaz-Martin, M.S., Clarion University of Pennsylvania
Library

Gail L. Dicicco, Ph.D., University of Pittsburgh
Assistant Professor, Health and Physical Education
Christian M. Dickinson, D.M.A., Catholic University of America
Assistant Professor, Music
William E. Dietrich, Jr., Ph.D., University of Pennsylvania
Professor, Biology
John L. Dietz, D.M.A., University of Michigan
Professor, Music
Richard A. DiStanislao, M.A., Indiana University of Pennsylvania
Registrar, Office of the Registrar
Michelle D. Doas, Ed.D., West Virginia University
Assistant Professor, Nursing and Allied Health
Joseph W. Domaracki, Ph.D., University of Pittsburgh
Associate Professor, Special Education and Clinical Services
H. Edward Donley, Ph.D., Carnegie Mellon University
Professor, Mathematics
Jeannine L. Donna, Ph.D., University of Pennsylvania
Associate Professor, English
David E. Doverspike, J.D., Ed.D., University of Akron
Assistant Professor, Professional Studies in Education
David B. Downing, Ph.D., State University of New York at Buffalo
Professor, English
Rita G. Drapkin, Ph.D., University of Pittsburgh
Associate Professor, Assistant Director and Director of Training and Counseling Psychologist, Counseling and Student Development Center
Victor S. Drescher, D.M.L., Middlebury College
Professor, Spanish and Classical Languages
Susan S. Drummond, M.L.S., University of Pittsburgh
Assistant Professor, Libraries and Media Resources
Rebecca A. Dubovsky, M.A., Clarion University of Pennsylvania
Assistant Professor, Mathematics
Kurt P. Dudt, Ph.D., University of Pittsburgh
Professor, Chairperson, Communications Media
Catherine M. Dugan, D.Ed., Indiana University of Pennsylvania
Assistant Professor, Director, Advising and Testing Center
Diane L. Duntley, Ed.D., State University of New York at Buffalo
Professor, Director, Academic Information Systems
James A. Dyal, Ph.D., University of Illinois
Professor, Economics

E
Robert E. Early, M.A., Indiana University
Assistant Professor, Mathematics
Alan D. Eastman, Ph.D., Florida State University
Associate Professor, Finance and Legal Studies
Roberta M. Eddy, Ph.D., University of Pittsburgh
Associate Professor, Chemistry
Beverly J. Edwards, Ph.D., The University of Tulsa
University School
Kevin E. Eisensmith, D.M.A., Temple University
Assistant Professor, Music
Wendy L. Elcesser, Ph.D., University of Vermont
Assistant Professor, Chemistry
John R. Ellerbach, Ed.D., University of Oklahoma
Assistant Professor, Journalism
Deborah A. Ellermeyer, D.Ed., Indiana University of Pennsylvania
Assistant Professor, University School
Joan B. Elliott, Ed.D., The Pennsylvania State University
Professor, Professional Studies in Education
Ronald R. Emerick, Ph.D., University of Pittsburgh
Professor, English
Steven C. Ender, Ed.D., University of Georgia
Professor, Educational Counselor, Learning Center
Mary C. Enderson, Ph.D., University of Georgia
Associate Professor, Mathematics
John M. Engler, D.P.H., University of Pittsburgh
Associate Professor, Safety Sciences

F
Thomas W. Falcone, D.B.A., Kent State University
Professor, Management
Karen A. Fallon, M.S., The Pennsylvania State University
Assistant Professor, Special Education
Margaret A. Farrah, Ph.D., Carnegie Mellon University
Assistant Professor, Professional Studies in Education
Lynda M. Federoff, Ph.D., West Virginia University
Assistant Professor, Psychology
Lawrence M. Feldman, Ph.D., State University of New York at Buffalo
Associate Professor, Mathematics
Beatrice S. Fennimore, D.Ed., Columbia University
Professor, Professional Studies in Education
Laura E. Ferguson, M.M.E., University of Illinois
Assistant Professor, Music
Lon H. Ferguson, D.Ed., University of Pittsburgh
Associate Professor, Chairperson, Safety Sciences
Vincent J. Ferrara, Ph.D., Fordham University
Professor, Philosophy and Religious Studies
Diane R. Ferrell, Ph.D., University of Pittsburgh
Assistant Professor, Special Education and Clinical Services
Trenton R. Ferro, Ed.D., Northern Illinois University
Associate Professor, Chairperson, Adult and Community Education
Caleb P. Finegan, Ph.D., University of Florida
Assistant Professor, History
David A. Foltz, Ph.D., University of Arizona
Professor, Spanish and Classical Languages
Janet H. Fontaine, Ph.D., University of Hawaii
Associate Professor, Counseling
William R. Forbes, Ph.D., Indiana University
Professor, Biology
John C. Ford, Ph.D., Northeastern University
Associate Professor, Chemistry
Douglas H. Frank, Ph.D., University of Southern California
Associate Professor, Mathematics
Sharon Franklin-Rahkonen, Ph.D., Indiana University
Assistant Professor, History
W. Larry Freeman, Ph.D., Clemson University
Professor, Physics
Donald P. Fritz, Jr., M.Ed., Indiana University of Pennsylvania
Assistant Professor, English
Edwin J. Fry, M.M., DePaul University
Associate Professor, Music

G
Norman W. Gaggini, M.Ed., Indiana University of Pennsylvania
Professor, Physics
Robert Gallen, Ph.D., University of Kentucky
Assistant Professor, Psychology
Victor Q. Garcia, Ph.D., University of California-Santa Barbara
Associate Professor, Anthropology
Rajendar K. Garg, Ph.D., University of Massachusetts
Professor, Marketing
Alan Gart, Ph.D., University of Pennsylvania
Associate Professor, Finance and Legal Studies
Susan I. Gatti, Ph.D., University of Pittsburgh
Professor, English
Robert L. Gaylor, Ph.D., University of Pittsburgh
Associate Professor, Industrial and Labor Relations
Jerry G. Gebhard, Ed.D., Columbia University
Professor, English; American Language Institute
Robert P. Gendron, Ph.D., Duke University
Professor, Biology
Gail J. Gerlach, Ed.D., Temple University
Professor, Professional Studies in Education
Michele A. Gerwick, M.S., Indiana University of Pennsylvania
Associate Professor, Nursing and Allied Health
Mohamed E. Ghobashy, Ph.D., Hochschule fuer Wethandel; C.P.A.
Professor, Accounting
John J. Gibbs, Ph.D., State University of New York at Albany
Professor, Criminology
Manton C. Gibbs, Ph.D., Michigan State University
Professor, Management
James E. Gibson, Ph.D., Temple University
Associate Professor, Philosophy and Religious Studies
Robert D. Gibson, M.A., The Pennsylvania State University
Professor, Chairperson, Military Science
Rosemary L. Gido, Ph.D., State University of New York at Albany
Associate Professor, Criminology
Dennis M. Giever, Ph.D., Indiana University of Pennsylvania
Assistant Professor, Chairperson, Criminology
Andrew W. Gillham, M.F.A., Michigan State University
Associate Professor, Art
Jayne R. Giniewicz, Ph.D., The Pennsylvania State University
Associate Professor, Physics

Eileen J. Glisan, Ph.D., University of Pittsburgh
University Professor and Professor, Spanish and Classical Languages
Susan Glor-Sheib, Ph.D., University of Pittsburgh
Associate Professor, Special Education and Clinical Services
Irving Godt, Ph.D., New York University
Professor, Music
Janet E. Gochel, Ph.D., University of Nebraska-Lincoln
Professor, English; Director, Robert E. Cook Honors College
Edward W. Gondolf, Ed.D., Boston University
Professor, Sociology
Beverly J. Goodwin, Ph.D., University of Pittsburgh
Professor, Psychology
Philip B. Gordon, Ph.D., The Ohio State University
Assistant Professor, Human Development and Environmental Studies
Jacqueline L. Gorman, Ph.D., Indiana University
Associate Professor, Mathematics; Dean's Associate, College of Natural Sciences and Mathematics
Brooke V. Grant, M.A., University of Pittsburgh
Associate Professor, Sociology
John G. Grassinger, M.L.S., University of Pittsburgh
Associate Professor, Faculty Associate
Cassandra C. Green, M.A., Indiana University of Pennsylvania
Assistant Professor, Educational Counselor, Learning Center
David E. Grover, Ph.D., University of Kentucky
Professor, Psychology
M. Jan Guidry, Ph.D., University of Kansas
Assistant Professor, Professional Studies in Education
Lorraine J. Guth, Ph.D., Indiana University
Assistant Professor, Counseling

H **Richard A. Halapin**, Ph.D., University of Pittsburgh
Associate Professor, Management Information Systems and Decision Sciences
Frank W. Hall II, Ph.D., University of Montana
Professor, Geoscience
Linda M. Hall, D.Ed., Indiana University of Pennsylvania
Associate Professor, Student Affairs in Higher Education
Janis M. Handler, M.S., Indiana University
Assistant Professor, Communications Media
Mary Ann Hannibal, Ph.D., State University of New York at Buffalo
Assistant Professor, Professional Studies in Education
Kathleen J. Hanrahan, Ph.D., Rutgers, The State University of New Jersey
Professor, Criminology
Roy W. Harding, Ph.D., California Institute of Technology
Professor, Chemistry
Jason W. Hart, Ph.D., Virginia Commonwealth University
Assistant Professor, Psychology
Rebecca L. Hartman, Ed.D., Teachers College, Columbia University
Assistant Professor, Nursing and Allied Health; Coordinator, Allied Health Professions
Mary Logan Hastings, D.M.A., University of Maryland
Assistant Professor, Music
Malcolm R. Hayward III, Ph.D., Tulane University
Professor, English
Nancy M. Hayward, Ph.D., Indiana University of Pennsylvania
Associate Professor, English
Robert B. Heasley, Ph.D., Cornell University
Assistant Professor, Sociology
Judith M. Hechtman, Ed.D., University of Pittsburgh
Professor, Chairperson, University School
D. Alex Heckert, Ph.D., University of Iowa
Professor, Sociology
Janice L. Heckroth, Ed.D., University of South Dakota
Associate Professor, Human Development and Environmental Studies
Donn W. Hedman, M.F.A., Washington State University
Professor, Art
Patricia I. Heilman, Ph.D., Indiana University of Pennsylvania
Professor, Journalism
Virginia Hemby, Ph.D., University of Southern Mississippi
Associate Professor, Technology Support and Training
Anita C. Henry, Ph.D., Indiana University
Professor, French
Herlinda Hernandez, M.A., University of the Americas (Mexico)
Associate Professor, Spanish and Classical Languages
Kenneth E. Hershman, Ph.D., Purdue University
Professor, Physics
Robert D. Hinrichsen, Ph.D., Indiana University
Assistant Professor, Biology
Mary Jane Kuffner Hirt, Ph.D., University of Pittsburgh
Associate Professor, Political Science
Robert H. Hoellein, Ph.D., The Ohio State University
Professor, Educational and School Psychology
Carolyn B. Hoffman, Ph.D., University of Pittsburgh
Assistant Professor, Special Education and Clinical Services
Tawny Holm, Ph.D., Johns Hopkins University
Assistant Professor, Philosophy and Religious Studies
Janice L. Holmes, Ph.D., University of Pittsburgh
Associate Professor, Nursing and Allied Health
Harvey S. Holtz, Ph.D., City University of New York
Professor, Chairperson, Sociology
James D. Hooks, Ph.D., University of Pittsburgh
Professor, Libraries and Media Resources
Bryan K. Honser, M.S.N., University of Pittsburgh
Assistant Professor, Nursing and Allied Health
Steven A. Hovan, Ph.D., University of Michigan
Associate Professor, Geoscience
Paul E. Hrabovsky, M.Ed., Indiana University of Pennsylvania
Assistant Professor, Math Specialist, Learning Center
Barbara H. Hudson, Ph.D., Howard University
Professor, English
Suzanne H. Hudson, Ph.D., Marquette University
Professor, English
Arthur C. Hulse, Ph.D., Arizona State University
Professor, Biology
Jan G. Humphreys, Ph.D., Virginia Polytechnic Institute and State University
Professor, Biology
Herbert M. Hunter, Ph.D., Boston University
Professor, Sociology
C. Mark Hurlbert, D.A., State University of New York at Albany
Professor, English
Laureen C. Hurt, Ph.D., Indiana University
Assistant Professor, French
Kimberly J. Husenits, Psy.D., Indiana University of Pennsylvania
Assistant Professor, Psychology
Beth Hutson-Feudale, M.Ed., California University of Pennsylvania
Assistant Professor, University School
Mary Ann Hvizdos, Ph.D., University of Pittsburgh
Assistant Professor, Human Development and Environmental Studies
Syed N. Hyder, M.Tax., Georgia State University; C.P.A.; C.C.A.
Assistant Professor, Accounting

I **Barbara A. Illig-Aviles**, Ed.D., Indiana University of Pennsylvania
Assistant Professor, Professional Studies in Education

J **Martha J. Jack**, M.S., Indiana University of Pennsylvania
Assistant Professor, Biology
Kent R. Jackson, Ph.D., University of Kansas
Assistant Professor, Special Education
Steven F. Jackson, Ph.D., University of Michigan
Associate Professor, Political Science
Mary R. Jalongo, Ph.D., University of Toledo
University Professor and Professor, Professional Studies in Education
Christopher A. Janicak, Ph.D., Loyola University
Associate Professor, Safety Sciences
Sandra L. Janicki, M.A., University of Pittsburgh
Assistant Professor, Libraries and Media Resources
Joann C. Janosko, M.L.S., University of Pittsburgh
Assistant Professor, Libraries and Media Resources
Yao (Rosa) N. Jen, M.S., Florida State University
Assistant Professor, Libraries and Media Resources
Melvin A. Jenkins, M.A., Indiana University of Pennsylvania
Assistant Professor, Educational Counselor, Learning Center
Linda G. Jennings, D.M.A., University of Texas
Assistant Professor, Music
Randy L. Jesick, M.S.J., West Virginia University
Assistant Professor, Journalism
Crawford W. Johnson, M.A., Atlanta University
Associate Professor, College of Humanities and Social Sciences
Rita M. Johnson, Ph.D., The Pennsylvania State University
Associate Professor, Food and Nutrition

Sue F. Johnson, Ph.D., Michigan State University
Assistant Professor, English
Brian R. Jones, M.F.A., University of Florida
Assistant Professor, Theater and Dance
Foster T. Jones, Ph.D., Indiana University
Professor, French
Anthony J. Joseph, Ph.D., University of the West Indies
Professor, Safety Sciences
Jerry A. Joseph, Ph.D., University of Pittsburgh
Associate Professor, Accounting
Myrtle M. Joseph, M.L.S., Catholic University of America
Assistant Professor, Libraries and Media Resources
James J. Jozefowicz, Ph.D., State University of New York at Albany
Assistant Professor, Economics
Stephanie M. Jozefowicz, M.A., Indiana University
Assistant Professor, Economics
Larry A. Judge, B.S.Ed., Indiana University of Pennsylvania
Instructor, Coordinator, Marketing, Promotion, and Radio Network
Ronald A. Juliette, Ed.D., Indiana University
Professor, Communications Media
Liliana E. Jurewicz, Ph.D., University of Iowa
Assistant Professor, Spanish and Classical Languages

K

Satoshi Kanazawa, Ph.D., University of Arizona
Assistant Professor, Sociology
Krzysztof Kaniasty, Ph.D., University of Louisville
Professor, Psychology
Charles M. Kanyarusoke, Ph.D., University of Pittsburgh
Associate Professor, Communications Media
Nicholas Karatjas, Ph.D., State University of New York at Stony Brook
Professor, Chairperson, Economics
Majid Karimi, Ph.D., University of Oklahoma
Associate Professor, Physics
Irvin C. Kauffman, Assistant Principal Cello, Pittsburgh Symphony Orchestra
Associate Professor, Music
Cathy C. Kaufman, Ph.D., University of Pittsburgh
Professor, Professional Studies in Education
Nedra J. Kearney-Vakulick, Ph.D., University of Pittsburgh
Associate Professor, Professional Studies in Education
Christine W. Kesner, Ph.D., Carnegie Mellon University
Professor, Human Development and Environmental Studies
Michael H. Kesner, Ph.D., University of Massachusetts
Professor, Biology
Maurice A. Kilwein-Guevara, Ph.D., University of Wisconsin at Milwaukee
Professor, English
Elizabeth A. Kincade, Ph.D., The Pennsylvania State University
Associate Professor, Coordinator of Groups and Outreach and Counseling Psychologist, Counseling and Student Development Center
Robert L. King, Ed.D., The Pennsylvania State University
Professor, Professional Studies in Education
Robert J. Kirby, Jr., M.S.L.S., Catholic University of America
Assistant Professor, Libraries and Media Resources
Floyd L. Klavetter, Ph.D., California Institute of Technology
Assistant Professor, Chemistry
Diane H. Klein, Ph.D., University of Pittsburgh
Associate Professor, Special Education and Clinical Services
Germain P. Kline, M.B.A., Indiana University of Pennsylvania
Associate Professor, Chairperson, Accounting
Linda R. Klingaman, Ph.D., The Pennsylvania State University
Associate Professor, Health and Physical Education
Blaine E. Knupp, M.L.S., University of Pittsburgh
Assistant Professor, Libraries and Media Resources
Jaejin Ko, Ph.D., Northeastern University
Assistant Professor, Chemistry
Anne E. Kondo, Ph.D., University of Western Ontario
Assistant Professor, Chemistry
Paul I. Kornfeld, Ed.D., Illinois State University
Associate Professor, Communications Media
Robert M. Kostelnik, Ph.D., University of Pittsburgh
Assistant Professor, Health and Physical Education
Paul J. Kovacs, Ph.D., University of Pittsburgh
Associate Professor, Technology Support and Training
Barbara A. Kraszewski, M.A., Carnegie Mellon University
Associate Professor, English
Krish S. Krishnan, Ph.D., University of Pittsburgh
Professor, Chairperson, Marketing
Laurence D. Kruckman, Ph.D., Southern Illinois University
Professor, Anthropology
Joseph S. Krupnik, M.A., The Pennsylvania State University
Associate Professor, English
Sherrill A. Kuckuck, D.Ed., University of Pittsburgh
Professor, Director, Student Development Programs
John W. Kuehn, D.M.A., University of Colorado
University Professor and Professor, Music
Lawrence Kupchella, Ph.D., The Pennsylvania State University
Assistant Professor, Chemistry
Barbara N. Kupetz, Ed.D., University of Pittsburgh
Associate Professor, Professional Studies in Education
Jodell L. Kuzneski, M.N.Ed., University of Pittsburgh
Associate Professor, Chairperson, Nursing and Allied Health

L

Nadene A. L'Amoreaux, M.A., Edinboro University of Pennsylvania
Assistant Professor, Counseling
Amy L. Labant, M.S.N., Indiana University of Pennsylvania
Assistant Professor, Nursing and Allied Health
Charles H. Lake, Ph.D., State University of New York at Buffalo
Assistant Professor, Chemistry
Richard J. Lamberski, Ph.D., The Pennsylvania State University
Professor, Communications Media
David J. LaPorte, Ph.D., Temple University
Associate Professor, Psychology
John W. Larner, Ph.D., West Virginia University
Associate Professor, History
Lynda L. LaRoche, M.F.A., Indiana University
Assistant Professor, Art
Walter R. Laude, M.A., Scarritt College
Associate Professor, Libraries and Media Resources
Daniel R. Lee, Ph.D., University of Maryland
Assistant Professor, Criminology
Mary Beth Leidman-Golub, Ed.D., George Peabody College for Teachers, Vanderbilt University
Professor, Communications Media
James S. Lenze, Ph.D., The Pennsylvania State University
Assistant Professor, Communications Media
Edward M. Levinson, Ed.D., Virginia Polytechnic Institute and State University
Professor, Educational and School Psychology
Tian-Min Lin, Ph.D., Boston University
Professor, Philosophy and Religious Studies
Leann Lincecum, A.B.D., Texas Tech University
Assistant Professor, Technology Support and Training
Alicia V. Linzey, Ph.D., Virginia Polytechnic Institute and State University
Professor, Biology
Sally A. Lipsky, Ph.D., University of Pittsburgh
Associate Professor, Reading/Study Skills Specialist, Learning Center
Renee P. Liscinsky, Doctorat du IIIme cycle, Universite de Besancon (France)
Professor, Chairperson, French and German
Karl B. Lloyd, Ph.D., University of Pittsburgh
Associate Professor, Management Information Systems and Decision Sciences
Robert I. Lloyd, D.M.A., Catholic University of America
Professor, Music
George R. Long, Ph.D., Utah State University
Associate Professor, Chemistry
Thomas R. Lord, Ed.D., Rutgers, The State University of New Jersey
Professor, Biology
Soo Chun Lu, Ph.D., Ohio University
Assistant Professor, History
A. Lynne Lucas, M.L.S., University of Pittsburgh
Assistant Professor, Libraries and Media Resources
Joanne Y. Luchsinger, M.M., University of Illinois
Assistant Professor, Music
Carl S. Luciano, Ph.D., West Virginia University
Professor, Biology
Ronald Lunardini, Ed.D., University of Pittsburgh
Associate Professor, Chairperson, Student Affairs in Higher Education

Dasen Luo, Ph.D., Case Western Reserve University
Assistant Professor, Psychology
David M. Lynch, Ph.D., West Virginia University
Professor, Political Science
Sandra Joyce Lynn, M.S., Auburn University
Assistant Professor, Human Development and Environmental Studies

M
Christoph E. Maier, Ph.D., Oklahoma State University
Assistant Professor, Mathematics
Marjorie A. Mambo, Ed.D., Teachers College, Columbia University
Associate Professor, University School
Joseph G. Mannard, Ph.D., University of Maryland
Assistant Professor, History
Eleanor M. Mannikka, Ph.D., University of Michigan
Assistant Professor, Art
Sarah J. Mantel, D.M.A., University of Illinois
Professor, Music
Irwin Murray Marcus, Ph.D., Lehigh University
Professor, History
Barbara W. Marquette, Ph.D., West Virginia University
Professor, Psychology
John L. Marsden, Ph.D., Ohio University
Assistant Professor, English
Laura E. Marshak, Ph.D., University of Pittsburgh
Professor, Special Education and Clinical Services
Lincoln H. Marshall, Ph.D., American University
Associate Professor, Hotel, Restaurant, and Institutional Management
Arthur H. Martel, Ph.D., University of Massachusetts
Professor, Economics
Jamie S. Martin, Ph.D., Indiana University of Pennsylvania
Assistant Professor, Criminology
Randy L. Martin, Ph.D., University of Nebraska-Lincoln
Professor, Criminology
David G. Martynuik, M.M., University of Michigan
Assistant Professor, Music
Lea Masiello, Ph.D., University of Cincinnati
Professor, English
Frances Ann Massey, Ph.D., University of Pittsburgh
Professor, Mathematics
John K. Matolyak, Ph.D., West Virginia University
Professor, Physics
Fuyuko Matsubara, M.F.A., Cranbrook Academy of Art
Assistant Professor, Art
Donald A. McAndrew, Ph.D., State University of New York at Buffalo
Professor, English
Melissa L. McBride, D.M.A., Stanford University
Assistant Professor, Music
R. Paul McCauley, Ph.D., Sam Houston State University
Professor, Criminology
Catherine L. McClenahan, Ph.D., University of Wisconsin-Milwaukee
Assistant Professor, English
Gary R. McClusky, M.S., University of Michigan
Assistant Professor, Safety Sciences
Donald S. McClure, Ph.D., Vanderbilt University
Associate Professor, Chairperson, English
Susan H. McClure, Ph.D., Indiana University of Pennsylvania
Assistant Professor, English
Charles J. McCollester, Ph.D., Louvain College (Belgium)
Associate Professor, Industrial and Labor Relations
Sally M. McCombie, M.Ed., Indiana University of Pennsylvania
Instructor, Human Development and Environmental Studies
Charles R. McCreary, Ph.D., Northwestern University
Associate Professor, French
G. Patrick McCreary, M.F.A., Mason Gross School of the Arts, Rutgers, The State University of New Jersey
Assistant Professor, Theater and Dance
Theresa R. McDevitt, Ph.D., Kent State University
Associate Professor, Libraries and Media Resources
Judith R. McDonough, Ph.D., Auburn University
Associate Professor, History
Maureen C. McHugh, Ph.D., University of Pittsburgh
Professor, Psychology
Kevin F. McKee, Ph.D., University of Pittsburgh
Assistant Professor, Health and Physical Education
Mark E. McNabb, M.A., Adams State University
Assistant Professor, Criminology
Donald S. McPherson, Ph.D., University of Pittsburgh
University Professor and Professor, Industrial and Labor Relations
Linda J. McPherson, M.Ed., Indiana University of Pennsylvania
Instructor, English
William C. McPherson, Ph.D., New York University
Professor, Technology Support and Training
William M. Meil, Ph.D., Washington State University
Assistant Professor, Psychology
Alida V. Merlo, Ph.D., Fordham University
Professor, Criminology
Mary H. Micco, Ph.D., University of Pittsburgh
Associate Professor, Computer Science
Vincent P. Mikkelsen, Ph.D., Florida State University
Associate Professor, Professional Studies in Education
James G. Mill, Jr., Ph.D., University of Pittsburgh
Professor, Chairperson, Health and Physical Education
Jeffrey A. Miller, M.S., The Pennsylvania State University
Assistant Professor, Hotel, Restaurant, and Institutional Management
John A. Mills, Ph.D., State University of New York at Buffalo
Professor, Counseling Psychologist, Counseling and Student Development Center
Robert E. Millward, Ed.D., The Pennsylvania State University
Professor, Professional Studies in Education
George R. Miltz, M.A., University of Cincinnati
Associate Professor, Spanish and Classical Languages
Brenda M. Mitchell, M.A., University of Illinois
Associate Professor, Art
George E. Mitchell, Ph.D., University of Virginia
Professor, Mathematics
Joel D. Mlecko, Ph.D., Catholic University of America
Professor, Philosophy and Religious Studies
Ahmed A. Mohamed, Ph.D., University of Mississippi
Associate Professor, Management
Kofie L. Montgomery, B.S., Indiana University
Instructor, Health and Physical Education
Sharon B. Montgomery, Ph.D., University of Pennsylvania
Professor, Philosophy and Religious Studies
Archie F. Moore, Jr., D.Ed., The Pennsylvania State University
Professor, Health and Physical Education
Wayne A. Moore, Ed.D., Temple University
Professor, Chairperson, Technology Support and Training
Frederick W. Morgan, Ph.D., Southern Methodist University
Professor, Mathematics
John A. Mueller, Ed.D., Teachers College, Columbia University
Assistant Professor, Student Affairs in Higher Education
Stanford G. Mukasa, Ph.D., McGill University
Associate Professor, Journalism
Patrick D. Murphy, Ph.D., University of California
Professor, English
Robert J. Mutchnick, Ph.D., Florida State University
Professor, Criminology
David L. Myers, Ph.D., University of Maryland
Assistant Professor, Criminology
James R. Myers, Ed.D., West Virginia University
Associate Professor, Mathematics

N
Prashanth B. Nagendra, Ph.D., Rutgers, The State University of New Jersey
Professor, Chairperson, Management
Ataollah Nahouraii, Ph.D., University of Pittsburgh
Professor, Management Information Systems and Decision Sciences
Anthony J. Nastase, Ph.D., University of Pittsburgh
Professor, Biology
Francis A. Nee, M.Ed., University of Pittsburgh
Associate Director, Intercollegiate Athletics
Alan E. Nelson, Ed.D., Indiana University of Pennsylvania
Associate Professor, Human Development and Environmental Studies
Linda Shearer Nelson, Ph.D., University of Pittsburgh
Professor, Chairperson, Human Development and Environmental Studies
James P. Nestor, D.A., Carnegie Mellon University
Professor, Art
Phillip D. Neusius, Ph.D., University of Missouri
Professor, Chairperson, Anthropology
Sarah W. Neusius, Ph.D., Northwestern University
Professor, Anthropology

Sandra J. Newell, Ph.D., University of Toledo
Professor, Biology
William L. Nicholson, Ed.D., University of Pittsburgh
Assistant Professor, Professional Studies in Education
Joseph E. Nolan, Ph.D., Texas Woman's University
Assistant Professor, Special Education
Linda C. Norris, Ph.D., University of Pittsburgh
Associate Professor, English
Thomas C. Nowak, Ph.D., Cornell University
Professor, Sociology
Richard C. Nowell, Ed.D., University of Rochester
Professor, Chairperson, Special Education and Clinical Services
Muhammad Z. Numan, Ph.D., College of William and Mary
Associate Professor, Physics

O
William W. Oblitey, Ph.D., University of Pittsburgh
Associate Professor, Computer Science
Brian W. Okey, Ph.D., University of Guelph
Assistant Professor, Geography and Regional Planning
Gary James Olmstead, D.M.A., Cleveland Institute of Music/Case Western Reserve University
Professor, Music
Therese D. O'Neil, M.A., Indiana University of Pennsylvania
Instructor, Computer Science
Ludo A. op de Beeck, Ph.D., University of Pittsburgh
Professor, French
Christopher R. Orchard, D.Phil., University of Oxford
Assistant Professor, English
John N. Orife, Ph.D., Michigan State University
Associate Professor, Management
Stephen W. Osborne, Ph.D., University of Pittsburgh
Professor, Management

P
Gian S. Pagnucci, Ph.D., University of Wisconsin
Associate Professor, English
Elizabeth A. Palmer, Ph.D., Duquesne University
Assistant Professor, Nursing and Allied Health
Susan M. Palmisano, M.F.A., University of Cincinnati
Associate Professor, Art
Kevin J. Patrick, Ph.D., University of North Carolina
Associate Professor, Geography and Regional Planning
Raymond P. Pavloski, Ph.D., McMaster University
Professor, Psychology
Terry L. Peard, Ph.D., Cornell University
Professor, Biology
Virginia Perdue, D.A., University of Michigan
Associate Professor, English
Daniel J. Perlongo, M.Mus., University of Michigan
Associate Professor, Music
Russell L. Peterson, Ph.D., Howard University
Associate Professor, Biology
Jerry L. Pickering, Ph.D., Rutgers, The State University of New Jersey
Professor, Biology
Elizabeth M. Pierce, Ph.D., University of Michigan
Associate Professor, Management Information Systems and Decision Sciences
David H. Pistole, Ph.D., Indiana State University
Professor, Biology
Karen E. Polansky, M.S., California State University-Los Angeles
Assistant Professor, Nursing and Allied Health
Duane M. Ponko, M.S., Duquesne University; C.P.A.
Assistant Professor, Accounting
Susan G. Poorman, Ph.D., University of Pittsburgh
Associate Professor, Nursing and Allied Health
Heather J. Huddleston Powers, Ph.D., University of California
Assistant Professor, English
Thomas R. Pressly, Ph.D., Kent State University
Associate Professor, Accounting
Keith D. Putirka, Ph.D., Columbia University
Assistant Professor, Geoscience

Q
John P. Quirk, Ed.D., University of Georgia
Professor, Educational and School Psychology

R
George M. Radakovic, Ph.D., University of Pittsburgh
Professor, Economics
Judith K. Radell, D.M.A., University of Illinois
Associate Professor, Music
Willard W. Radell, Ph.D., University of Illinois
Professor, Economics
Catherine Raeff, Ph.D., Clark University
Associate Professor, Psychology
Bennett A. Rafoth, Ed.D., University of Illinois
Professor, English
Mary Ann Rafoth, Ph.D., University of Georgia
Professor, Chairperson, Educational and School Psychology
Carl J. Rahkonen, Ph.D., Indiana University
Professor, Libraries and Media Resources
Monsurur Rahman, D.B.A., Southern Illinois University
Associate Professor, Accounting
David L. Ramsey, B.A., Washington and Jefferson College
Assistant Professor, Physics
Ruiess V. F. Ramsey, Ph.D., Wayne State University
Associate Professor, Chairperson, Chemistry
Gurmal Rattan, Ph.D., Ball State University
Professor, Educational and School Psychology
Phillip P. Ray, Ph.D., The Ohio State University
Assistant Professor, Mathematics
Terry T. Ray, J.D., Duquesne University
Professor, Finance and Legal Studies
Karen E. Ready, M.A., Middlebury College
Associate Professor, German
Clarice K. Reber, M.S., University of Michigan
Assistant Professor, Special Education and Clinical Services
James C. Reber, Ph.D., Duke University
Professor, Mathematics
Laura H. Rhodes, D.Ed., Indiana University of Pennsylvania
Assistant Professor, Safety Sciences
Darlene S. Richardson, Ph.D., Columbia University
Professor, Chairperson, Geoscience
Elizabeth A. Ricketts, Ph.D., Emory University
Assistant Professor, History
Robert H. Rittle, Ph.D., Kent State University
Professor, Psychology
José E. Rivera, M.S.Ed., Old Dominion University
Assistant Professor, Health and Physical Education
Philip E. Rivers, M.S., Central Missouri State University
Associate Professor, Safety Sciences
Donald J. Robbins, M.Ed., Indiana University of Pennsylvania
Associate Professor, Accounting
Jennifer Roberts, Ph.D., University of Nebraska
Assistant Professor, Criminology
Richard D. Roberts, M.S., The Pennsylvania State University
Associate Professor, Chairperson, Physics
Donald U. Robertson, Ph.D., Bowling Green State University
Professor, Psychology
Shari A. Robertson, Ph.D., University of Wisconsin
Assistant Professor, Special Education
Allen R. Robinson, Ph.D., Michigan State University
Professor, Health and Physical Education
Penny M. Rode, Ph.D., University of Pittsburgh
Assistant Professor, Art
James A. Rodger, D.B.A., Southern Illinois University at Carbondale
Associate Professor, Management Information Systems and Decision Sciences
Lydia H. Rodríguez, Ph.D., University of Cincinnati
Assistant Professor, Spanish and Classical Languages
Laurie Roehrich, Ph.D., University of South Florida
Associate Professor, Psychology
Rosaly D. Roffman, M.A., University of Hawaii
Associate Professor, English
Thomas J. Rogish, M.Ed., Frostburg State University
Assistant Professor, Athletics
Eric W. Rosenberger, Ph.D., The Pennsylvania State University
Assistant Professor, Counseling
Beverly J. Rossiter, M.N., University of Pittsburgh
Assistant Professor, Nursing and Allied Health
Richard D. Rowell, Ed.D., University of Georgia
Professor, Technology Support and Training

Eric Rubenstein, Ph.D., University of North Carolina
Assistant Professor, Philosophy and Religious Studies
Robert H. Russell, M.A.T., Indiana University
Assistant Professor, Chairperson, Journalism
John C. Ryan, Ph.D., University of Pittsburgh
Associate Professor, Management
Marveta M. Ryan, Ph.D., Harvard University
Assistant Professor, Spanish and Classical Languages

S

Daniel D. Sadler, Ph.D., University of Illinois
Associate Professor, Psychology
Mary E. Sadler, Ph.D., Case Western Reserve University
Associate Professor, Nursing and Allied Health; Director, Liberal Studies
Richard A. Sandbothe, Ph.D., Carnegie Mellon University
Associate Professor, Mathematics
Stephen K. Sanderson, Ph.D., University of Nebraska
Professor, Sociology
Nicolo A. Sartori, M.M., University of Michigan
Assistant Professor, Music
Lilia P. Savova, Ph.D., Sofia University (Bulgaria)
Associate Professor, English
John F. Scandrett, M.M., University of Wisconsin
Assistant Professor, Music
Karen L. Schmidt, Ph.D., University of California
Assistant Professor, Anthropology
Jo Anne Schneider, Ph.D., Temple University
Associate Professor, Sociology
Steven P. Schroeder, M.A., Duquesne University
Instructor, History
Lisa M. Sciulli, Ph.D., University of Pittsburgh
Associate Professor, Marketing
Yolanda M. Scott, Ph.D., University of Kentucky
Assistant Professor, Criminology
Gail S. Sechrist, Ph.D., Louisiana State University and A&M College
Assistant Professor, Geography and Regional Planning
Robert P. Sechrist, Ph.D., Louisiana State University and A&M College
Professor, Chairperson, Geography and Regional Planning
Thomas Sedwick, Ph.D., Syracuse University
Professor, Industrial and Labor Relations
Ronald F. See, Ph.D., State University of New York at Buffalo
Assistant Professor, Chemistry
Frederick A. Schring, M.Ed., University of Pittsburgh
Associate Professor, Associate Registrar for Academic Support Services
Michael T. Sell, Ph.D., University of Michigan
Assistant Professor, English
Constance A. Settlemyer, Ph.D., University of Pittsburgh
Professor, Nursing and Allied Health
Ronald G. Shafer, Ph.D., Duquesne University
University Professor and Professor, English
Varinder M. Sharma, Ph.D., University of North Texas
Associate Professor, Marketing
Maher Y. Shawer, Ph.D., University of Oklahoma
Professor, Mathematics
Teresa C. Shellenbarger, D.N.S., Widener University
Professor, Nursing and Allied Health
Cora Lou Sherburne, M.F.A., Musashino Art University (Japan)
Assistant Professor, Art
Ruth I. Shirey, Ph.D., University of Tennessee
Professor, Geography and Regional Planning
Stephen B. Shiring, Ed.D., University of Pittsburgh
Assistant Professor, Chairperson, Hotel, Restaurant, and Institutional Management
Daniel C. Shively, M.S.L.S., Drexel University
Associate Professor, Libraries and Media Resources
Charles J. Shubra, Jr., Ph.D., The Ohio State University
Professor, Computer Science
Thomas W. Simmons, Ph.D., Saint John's University
Associate Professor, Biology
Edward K. Simpson, M.F.A., University of North Carolina
Associate Professor, Theater and Dance
Helen C. Sitler, Ph.D., Indiana University of Pennsylvania
Assistant Professor, English
John F. Sitton, Ph.D., Boston University
Professor, Political Science
Frederick J. Slack, Ph.D., University of Pittsburgh
Associate Professor, Management
Thomas J. Slater, Ph.D., Oklahoma State University
Associate Professor, English
Mark A. Sloniger, Ph.D., University of Georgia
Assistant Professor, Health and Physical Education
Jonathan B. Smith, D.Ed., Temple University
Assistant Professor, Health and Physical Education
R. Roger Smith, Ph.D., University of Kentucky
Professor, Chairperson, Spanish and Classical Languages
Theresa S. Smith, Ph.D., Boston University
Professor, Philosophy and Religious Studies
Ronald E. Smits, Ph.D., Ball State University
Professor, English
C. Sue Snyder, Ph.D., University of Pittsburgh
Associate Professor, Nursing and Allied Health
Kay A. Snyder, Ph.D., Cornell University
Professor, Sociology
Stanley J. Sobolewski, Ph.D., State University of New York at Buffalo
Assistant Professor, Physics
James A. Solak, D.Ed., University of Pittsburgh
Associate Professor, Management Information Systems and Decision Sciences
Ramesh G. Soni, Ph.D., University of Texas at Arlington
Associate Professor, Management
Chun Lu Soo, Ph.D., Ohio University
History
Robert D. Soule, Ed.D., University of Pittsburgh
Professor, Safety Sciences
Jonathan N. Southard, Ph.D., Utah State University
Assistant Professor, Chemistry
Sharon Sowa, Ph.D., Colorado State University
Assistant Professor, Chemistry
Joseph B. Spicker, Ph.D., Catholic University of America
Professor, Spanish and Classical Languages
William M. Srsic, M.Ed., Edinboro University of Pennsylvania
Associate Professor, Associate Director, Financial Aid; Veteran Certifying Officer
John E. Stamp, Jr., D.M.A., Michigan State University
Professor, Music
Laurie N. Stamp, D.Ed., Indiana University of Pennsylvania
Associate Professor, Professional Studies in Education
James G. Staples, D.M.A., Eastman School of Music-University of Rochester
Professor, Music
Jay Start, Ph.D., University of Pittsburgh
Associate Professor, Communications Media
John H. Steelman, Ph.D., University of Virginia
Professor, Mathematics
David W. Stein, Ph.D., University of Pittsburgh
Associate Professor, Special Education and Clinical Services
Joanne B. Steiner, Ph.D., University of Rhode Island
Professor, Chairperson, Food and Nutrition
Ronald A. Steiner, M.S.L.S., Case Western Reserve University
Associate Professor, Chairperson, Libraries and Media Resources
Margaret M. Stempien, Ph.D., State University of New York at Buffalo
Associate Professor, Mathematics
Catherine R. Stephenson, Ed.D., University of Pittsburgh
Assistant Professor, University School
Rosalee M. Stilwell, Ph.D., Bowling Green State University
Assistant Professor, English
Lloyd K. Stires, Ph.D., Duke University
Professor, Psychology
Gary S. Stoudt, Ph.D., Lehigh University
Associate Professor, Mathematics
Peter M. Sullivan, Ph.D., Johns Hopkins University
Associate Professor, German
Connie J. Sutton, M.Ed., Indiana University of Pennsylvania
Associate Professor, Geoscience
Mary E. Swinker, Ph.D., The Ohio State University
Associate Professor, Human Development and Environmental Studies

Augusta Syty, Ph.D., University of Tennessee
Professor, Chemistry
Linda F. Szul, D.Ed., University of Pittsburgh
Associate Professor, Technology Support and Training

T
Vincent P. Taiani, Ph.D., State University of New York at Buffalo
Associate Professor, Marketing
Devki N. Talwar, Ph.D., Allahabad University (India)
University Professor and Professor, Physics
Dan J. Tannacito, Ph.D., University of Oregon
Professor, English
John F. Taylor, Ph.D., University of Missouri
Professor, Geoscience
Stephanie A. Taylor-Davis, Ph.D., The Pennsylvania State University
Assistant Professor, Food and Nutrition
Glen M. Tellis, Ph.D., The Pennsylvania State University
Assistant Professor, Special Education and Clinical Services
Alan G. Temes, Ph.D., University of Toledo
Assistant Professor, Health and Physical Education
Eugene F. Thibadeau, Ph.D., New York University
Professor, Foundations of Education
John C. Thomas, Jr., J.D., West Virginia University
Professor, Criminology
Carolyn A. Thompson, M.S., Indiana University of Pennsylvania
Associate Professor, Diversity Studies
Richard E. Thorell, M.A., University of Rochester
Associate Professor, Music
Gordon F. Thornton, Ph.D., The Ohio State University
Professor, Psychology
Sally W. Thornton, Ph.D., University of Pittsburgh
Associate Professor, Spanish and Classical Languages
Monte G. Tidwell, Ph.D., University of Pittsburgh
Associate Professor, Professional Studies in Education
Gwendolyn B. Torges-Hoffman, M.A., University of Arizona
Assistant Professor, Political Science
Ronald L. Trenney, M.S., The Pennsylvania State University
Assistant Professor, Health and Physical Education
Martha A. Troxell, J.D., L.L.M. (Taxation), Temple University
Professor, Finance and Legal Studies
Marie E. Twal, D.P.H., University of Pittsburgh
Assistant Professor, Nursing and Allied Health
Mark G. Twiest, Ph.D., University of Georgia
Associate Professor, Professional Studies in Education
Meghan M. Twiest, Ed.D., University of Georgia
Professor, Professional Studies in Education

V
Joan E. Van Dyke, M.F.A., Arizona State University
Assistant Professor, Theater and Dance
Thomas L. Van Dyke, Ph.D., Virginia Polytechnic Institute and State University
Associate Professor, Hotel, Restaurant, and Institutional Management
Todd A. VanWieren, M.A., University of Iowa
Instructor, Advising and Testing Center
Pothen Varughese, Ph.D., Kent State University
Professor, Chemistry
Michael W. Vella, Ph.D., University of California-Davis
Professor, English
Frank A. Viggiano, Jr., Ph.D., University of Pittsburgh
Professor, Human Development and Environmental Studies
Judith H. Villa, Ph.D., University of New Mexico
Assistant Professor, English
Patricia E. Villalobos, M.F.A., West Virginia University
Associate Professor, Art
Dorothy C. Vogel, Ph.D., New York University
Professor, History
Larry A. Vold, Ph.D., University of Wisconsin
Associate Professor, Professional Studies in Education

W
Therese M. Wacker, D.M.A., The Ohio State University
Assistant Professor, Music
Diane C. Wagoner, M.S., Indiana University of Pennsylvania
Instructor, Food and Nutrition
Janet M. Walker, Ph.D., Oregon State University
Assistant Professor, Mathematics
Irene L. Wallaert, M.A., Northwest University
Assistant Professor, French and German
Bernadette L. Walz, M.S.N., University of Pittsburgh
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Associate Professor, History
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Professor, Music
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Associate Professor, History
Dennis W. Whitson, Ph.D., University of Pittsburgh
Professor, Physics
Kustim Wibowo, Ph.D., University of Kentucky
Associate Professor, Management Information Systems and Decision Sciences
Vythilingam Wijekumar, Ph.D., The Ohio State University
Professor, Physics
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Assistant Professor, English
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Professor, English
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Assistant Professor, English
B. Gail Wilson, Ph.D., University of Pittsburgh
Associate Professor, Communications Media
Jean H. Wilson, M.A., University of Buffalo
Instructor, English
Lorraine P. Wilson, D.A., Ball State University
Associate Professor, Chairperson, Music
Nanci K. Wilson, Ph.D., University of Tennessee
Professor, Criminology
T. Kenneth Wilson, B.A., State University of New York at Buffalo
Associate Professor, English
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Professor, Biology
Stacey C. Winstead, M.A., Slippery Rock University
Assistant Professor, Educational Counselor/Assistant Director, Learning Center
Joette M. Wisnieski, Ph.D., University of Georgia
Associate Professor, Management
Robert I. Witchel, Ed.D., University of Georgia
Professor, Counseling
Ronald J. Woan, Ph.D., Florida State University
Associate Professor, Accounting
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Associate Professor, Computer Science
John T. Wood, Ph.D., University of Pittsburgh
Professor, Chemistry
Dawn E. Woodland, Ph.D., Southern Illinois University
Associate Professor, Technology Support and Training
John C. Woolcock, Ph.D., University of California-Riverside
Professor, Chemistry
Jason W. Worzbyt, M.M., University of North Texas
Assistant Professor, Music

John C. Worzbyt, Ed.D., University of Rochester
Professor, Counseling
Albert S. Wutsch, A.O.S., Culinary Institute of America
Assistant Professor, Culinary Arts

Wenfan Yan, Ph.D., State University of New York at Buffalo
Professor, Professional Studies in Education
Andrew T. Yang, Ph.D., University of Minnesota
Associate Professor, Computer Science
Lingyan Yang, M.A., University of Massachusetts
Assistant Professor, English
Stanley J. Yerep, M.Ed., Indiana University of Pennsylvania, C.P.A.
Assistant Professor, Accounting
Kwasi Yirenkyi, Ph.D., University of Pittsburgh
Associate Professor, Philosophy and Religious Studies
Nancy J. Yost, Ph.D., The Pennsylvania State University
Assistant Professor, University School
Caroll M. Young, Ph.D., University of Missouri
Professor, Spanish and Classical Languages
Keith R. Young, D.M.A., University of Maryland
Assistant Professor, Music

Mary L. Zanich, Ph.D., University of Pittsburgh
Professor, Chairperson, Psychology
Jun-Luc (John) Zhang, Ph.D., Syracuse University
Associate Professor, Mathematics
Sherwood E. Zimmerman, Ph.D., State University of New York at Albany
Professor, Criminology
Susan T. Zimny, Ph.D., University of Colorado
Professor, Psychology
Phillip J. Zorich, M.A., University of Oregon
Assistant Professor, Libraries and Media Resources
Nashat Zuraikat, Ph.D., University of Pittsburgh
Professor, Nursing and Allied Health

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Medical Technology

Americo B. Anton, M.D.
Director, Department of Laboratory Services, Altoona Hospital
Herbert E. Auerbach, D.O., Philadelphia College of Osteopathic Medicine
Medical Director, School of Medical Technology, Abington Memorial Hospital
Karen Barrett, Ph.D. (ASCP)
Program Director, School of Medical Technology, University of Hartford
George H. Barrows, M.D.
Medical Director, School of Medical Technology, University of Hartford
Kathryn Durr, M.T. (ASCP); M.S., M.A., Rider University
Program Director, School of Medical Technology, Abington Memorial Hospital
James T. Eastman III, M.D., University of Cincinnati College of Medicine
Medical Director, School of Medical Technology, Lancaster General Hospital
Nadine E. Gladfelter, M.S., Temple University
Program Director, School of Medical Technology, Lancaster General Hospital
Phyllis Gotkin, Ph.D., M.T. (ASCP)
Program Director, Clinical Laboratory Science Program, Elkins Park Hospital
Joanne S. Grant, M.T. (ASCP); M.S., Moravian College and Drexel University
Program Director, School of Clinical Laboratory Science, Reading Hospital and Medical Center
Stephen M. Johnson, M.T. (ASCP); M.S., The Ohio State University
Program Director, School of Medical Technology, St. Vincent Health Center
Kenneth H. Jurgens, M.D., State University of New York at Downstate Medical Center
Medical Director, School of Medical Technology, St. Vincent Health Center
William K. Natale, M.D., University of Pittsburgh; J.D., William Mitchell College of Law
Medical Director, Reading Hospital and Medical Center
Joseph R. Noel, B.S., York College
Director, Medical Technology Program, Altoona Hospital
Richard Rupkalvis, M.D., Rush Medical College
Medical Advisor, Clinical Laboratory Science Program, Elkins Park Hospital
Sharon K. Strauss, C.L.S. (NCA), M.T. (ASCP), M.S.; St. Joseph's University
Program Director, School of Clinical Laboratory Science, Reading Hospital and Medical Center

Nuclear Medicine Technology

Elaine M. Markon, R.T. (N), C.N.M.T.; M.S., Ohio University
Program Director, Nuclear Medicine Institute, University of Findlay

Respiratory Therapy

Jack Albert, R.R.T., C.P.F.T.; M.Ed., University of Pittsburgh
Instructor, School of Respiratory Care, Western Pennsylvania Hospital
Paul Fichler, F.C.C.P.; M.D., University of Pittsburgh
Medical Director, School of Respiratory Care, Western Pennsylvania Hospital
Jeffery Alan Heck, R.R.T.; M.S., University of Pittsburgh Medical Center
Instructor, School of Respiratory Care, Western Pennsylvania Hospital
Kathryn G. Kinderman, R.R.T., C.P.F.T.; M.S., University of Pittsburgh
William J. Malley, R.R.T., C.P.F.T.; M.S., University of Pittsburgh
Director, School of Respiratory Care, Western Pennsylvania Hospital
Catherine L. Myers, R.R.T.; M.Ed., The Pennsylvania State University
Instructor, School of Respiratory Care, Western Pennsylvania Hospital

Athletic Training/Sports Medicine

Physicians
David T. Bizousky, M.D., Hahnemann University, School of Medicine
Center for Orthopaedics and Sports Medicine
Paul B. Burton, D.O., University of Health Sciences, College of Osteopathic Medicine
Center for Orthopaedics and Sports Medicine
Douglas S. Fugate, M.D., Hahnemann University of Health Sciences
Center for Orthopaedics and Sports Medicine
Craig C. McKirgan, D.O., University of Osteopathic Medicine and Health Sciences
Center for Orthopaedics and Sports Medicine
Howard P. Miller, D.P.M., Ohio College of Podiatric Medicine
Center for Orthopaedics and Sports Medicine
Jagadeesha Shetty, M.D., Government Medical College, Bellary, India
Center for Orthopaedics and Sports Medicine

Allied Medical Staff

Cory E. Barton, A.T.C.; B.S., Indiana University of Pennsylvania
Keystone Rehabilitation Systems/Blairsville School District
Scott T. Bauer, A.T.C.; B.S., Indiana University of Pennsylvania
Keystone Rehabilitation Systems/Indiana School District
Christopher Fink, A.T.C.; B.S., Indiana University of Pennsylvania
Keystone Rehabilitation Systems/Saltsburg School District
Alan M. Keefe, P.A.-C, Duquesne University
Center for Orthopaedics and Sports Medicine
Christa L. Pontani, C.R.N.P., Duquesne University
Center for Orthopaedics and Sports Medicine
Dennis Shultz, P.T.; M.S., University of Pittsburgh
Keystone Rehabilitation Systems
Matthew Wilson, A.T.C.; B.S., Indiana University of Pennsylvania
Keystone Rehabilitation Systems Homer Center School District

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